Florida Mountain Mining Sites
Silver City Vicinity
Owyhee County
Idaho

HAER No. ID-31

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

PHOTOGRAPHS

Historic American Engineering Record
National Park Service
Columbia Cascades System Support Office
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HISTORIC AMERICAN ENGINEERING RECORD

FLORIDIA MOUNTAIN MINING SITES

HAER NO. ID-31

Location:	Florida Mountain is part of the Carson Mining District in Owyhee County. The county forms the southwest corner of Idaho and is bordered on the north by Snake River. The district includes the drainage area of Jordan Creek above the mouth of Louse Creek and includes the western half of War Eagle Mountain, Florida Mountain, and the DeLamar properties to the west of Florida Mountain. The town of Silver City was platted in the flat saddle between Florida and War Eagle Mountains.
Quad:	USGS DeLamar 7.5
Date of Construction:	1890s-1930s
Present Owners:	Kinross DeLamar Mine Company
Present Use:	To be demolished
Significance:	The site is associated with early mining activity (1860s-1880s) in southwestern Idaho.
Recorded by:	Barbara Perry Bauer, Madeline Buckendorf
Date:	June 1995

INTRODUCTION

Florida Mountain is a part of the Carson Mining District in Owyhee County, Idaho. The county forms the southwest corner of Idaho and is bordered on the north by the Snake River. The Carson District was organized by miners who arrived in the area in 1863 and found placer gold in Jordan Creek. The district included the drainage area of Jordan Creek above the mouth of Louse Creek and included the western half of War Eagle Mountain, Florida Mountain, and the DeLamar properties to the west of Florida Mountain. The town of Silver City was platted in a flat saddle between Florida and War Eagle mountains and became the main business and service center for area mines.

As early as 1926 the geological bulletins published by the Idaho Bureau of Mines and Geology declared that the Carson District, as well as the adjacent French, Steele, and Flint districts were "completely disorganized," their names beginning to disappear from local literature. [1] Despite the district's disintegration, mining continued well into the decades of the twentieth century and continues today. In 1978 the Idaho State Historic Preservation Office created the Silver City Historic District, which includes all of Florida Mountain and most of the Carson District. The Kinross Mining Company plans to extract gold and silver from the northwestern side of Florida Mountain. Using open-pit methods, the company will destroy what remains of the historic mining sites in this area. This Historic American Engineering Record is prepared as mitigation for demolishing them.

Several histories of Silver City and its mining economy already have been published. These describe the general progress of Silver City, its economic and social life, and the rise and fall in Carson District mining fortunes. In addition, two historical overviews have been prepared since 1988 of the district as part of Kinross's permit requirements. These have supplied additional detail on mining technology and the mining sites about to be destroyed.[2]

This narrative begins with a brief geological description of the mountain as an aid to understanding how it was mined. It then summarizes many of the historic and contextual themes developed more fully in other works. The main section of the narrative has not been published

elsewhere and examines the technology, corporate organization, and sites in the Florida Mountain portion of the Carson District. The final part of the report describes the mining sites that will be affected by the Kinross project.

A DESCRIPTION OF FLORIDA MOUNTAIN

Florida Mountain is part of the Owyhee Range and located in the north half of Owyhee County. A visitor may approach it by traveling to Silver City, where the mountain flanks the west side of town. It may also be approached from the town of Jordan Valley, where a road takes a visitor to the DeLamar mine and proceeds across the northwest side of Florida Mountain to Silver City.

The Owyhee Range began to form about 70 million years ago, when domes of granite formed underneath the overlying rock. The rock eroded toward the Snake River Plain to the north. A process of basin and range creation began and continues today. This has produced breaks and faults in the Silver City area that cut the mountains in a northeasterly direction, creating many parallel lines of weakness in the rock.

A series of intermittent lava flows erupted on the surface at the western side of the Owyhee Range, each followed by erosion and stream flows which deposited sedimentation on top of it, forming a bed for a new flow. This explains the complex interbedding of sediments and lava flows the miners found in the 1800s. After the early flows, rhyolite ash--probably from eastern Oregon--erupted explosively and formed hot flows over the earlier layers of lava and sediments. As the surface layers cooled, they cracked into the jagged shards of rock found on Florida Mountain and elsewhere in the Owyhees.

Later, perhaps 15 million years ago, hot fluids and gases containing gold, silver, and other metals pushed their way from beneath the granite, finding passages in the lines of weakness already fracturing the rock. As the fluids slowly cooled, they deposited their metals in these fissures, reaching through the granite and into the layers of basalt and rhyolite. The miners' called the rhyolite "porphyry" and often found thin stringers of ore separated by thin walls of the material.

In Florida Mountain, gold and silver was concentrated and deposited in various forms at elevations between 6,000 and 7,500 feet--typically in "streaks" on one side of the vein. The lodes in Florida Mountain ranged from a few inches wide to fifteen feet thick and were roughly parallel

to each other. One of them, the Black Jack, cut through the mountain for a distance of at least 7,000 feet.

The composition of the ores varied from one mountain in the Owyhee Range to another. The ores in Florida Mountain were different from those of War Eagle Mountain and DeLamar Mountain further west. This explains why milling methods that recovered War Eagle Mountain metals did not always work for the material mined later from Florida Mountain.

Where two fractures intersected, an ore body might shoot into the weakness and form what a miner might refer to as a "chimney." The tallest of these were 398 feet and 294 feet; they often were very rich. Below 6,000 feet, the ore changed. It contained silver and gold, but in concentrations too "low grade" to mine profitably using the prevailing technology.[3]

The erosion of millions of years sent country rock and mineral deposits alike down the gulches and streambeds of Florida Mountain. The gold concentrated in mountain streambeds and washed down to Jacobs Gulch, Jordan Creek, and other waterways.

When the prospectors first arrived in the Owyhees, they found the elevation of Florida Mountain about 7,750 feet above sea level. Rather than a sharp peak, it presented a long rounded ridge, a "great mound of earth and rock," as a Silver City reporter once put it.[4] The mountain slopes were covered with talus, but many thickets of trees and shrubs had gained a foothold. Finding outcrops of ore lodes, which the miners called "ledges," was daunting even for the canniest of prospectors. Many of the veins were completely hidden within the mountain, the suspicion of which led some prospectors to gouge long exploratory trenches.

Prospectors who first came to Florida Mountain had little trouble, however, finding gold in the streambeds. The placers were so rich--and the mountain so apparently barren of outcrops--that it became the conventional wisdom around Silver City to assume that the mountain had yielded its treasure and had nothing left to give. This theory balanced the fact that rich outcrops were readily located on War Eagle Mountain, the ravines of which had yielded considerably less placer. War Eagle's Oro Fino ledge, for example, projected ten to twelve feet above the surrounding formations.[5] Florida Mountain eventually rewarded those who rejected the conventional wisdom.

Although water has contributed to erosion on a geologic time scale, Florida Mountain does not receive a great deal of moisture in any given year. Water must be obtained from surface sources. The annual average precipitation ranges between ten inches to twenty-three inches depending on elevation. Most of it falls as 129 inches of snow.[6] Silver City miners reported drifts

of twenty-five feet to fifty feet, snowslides, and severe windstorms. Kinton Stevens, a Trade Dollar Company surveyor in 1908, wrote in his memoirs that Silver City merchants pushed the snow off their shed roofs onto the street and then had to tunnel through these piles to reach their front doors.[7] A few snowbanks sometimes persisted through the summer on the mountain's eastern side. In the spring, placer miners hustled to use the snowmelt rushing down the streambeds for they knew it would not last into the summer. The summers were reliably dry and warm, and the nights often were pleasantly cool.

THEMATIC SUMMARIES

Landscape Changes

Vegetation on the mountain followed elevation patterns. From lower elevations to higher, the dominant species were sagebrush, mountain mahogany, juniper, and Douglas fir.[8] Willow, cottonwood, poplar and chokecherry congregated along the creek bottoms. Sage, mahogany and juniper were most likely to appear in the foothill areas near valley floors. Stands of juniper and Douglas fir were scattered at the higher elevations.[9]

All Florida Mountain inhabitants, Indian and white, witnessed landscape changes triggered by mining and concentration of human settlement. The most dramatic vegetative change was the destruction of trees and timber resources. Within a few years after the first mineral extraction and permanent settlement, the juniper, mountain mahogany, Douglas fir and remnant pines were gone--Florida and War Eagle Mountains were denuded. Wood for fuel was hauled in from South Mountain, but large timbers needed for mine tunnels had to be imported from outside the region. Miners and ranchers introduced stock to the area. Local newspapers recounted herds of feral horses roaming Florida Mountain as late as the 1910s. During the 1920s, a large insect horde swarmed the mountain, consuming all plants in its path. Before mining tunnels laced its interior, placer miners cut ditches across Florida Mountain's west side.[10]

As mining activity has abated during the last fifty years, the dominant vegetation has begun to reestablish itself, particularly on the more protected slopes of the mountain. Only remnants of old roads, buildings, and mining works remain. Recent road-building and drill-pad construction, another human-inspired change in vegetative cover, are changing the mountain's face once more.

Native Peoples

Florida Mountain and its plant species were quite familiar to the Northern Paiute and Western Shoshone peoples who frequented the desert and mountains of the Owyhee country. Recent archaeological excavations found that a major lithic center for the fashioning of arrow and spear points existed near Silver City. The miners invaded their traditional territories, depleted game supplies, introduced alien species, and promoted vegetative changes that disrupted traditional lifeways. Many native people's disputes with Oregon Trail emigrants and Owyhee miners arose from these changes.

The Shoshone people roamed Owyhee County long before the mining invasion. In the Reynolds Creek basin, Folsom spear points have been found, dating from 10,900 to 10,400 years old.[11] In south-central Owyhee County, three phases of occupation in the archaic cultural tradition, dating from 6000 to 1200 A.D. through historic times, have been identified and analyzed. These nomadic people hunted with bows and arrows, ran large game animals off cliff sides, made pottery, and gathered bulbs, nuts and seeds along the headwaters of major creeks.[12] Pit houses have been found along the Snake River near Givens Hot Springs and Swan Falls.

Between the 1860s and the 1879 Bannock War, trouble between Indians and whites in the early Owyhee mining region most often occurred with Northern Shoshone and Bannock groups. The Western Shoshone, after signing the Ruby Valley Treaty of 1863, maintained peaceful relations with the mining camps and white settlers. Some Northern Paiutes and Western Shoshone even found work in the mines. Eventually area Shoshone and Paiute tribes were moved to the Duck Valley Indian Reservation, but many families continued to make seasonal pilgrimages to Silver City and DeLamar.[13]

Mining Settlement Patterns on Florida Mountain

Placing Euro-American order on the landscape meant following the natural valleys created by streams and creeks, but the mining landscape also seemed disordered. The utilitarian demands of the mining camps created a "build what you need" mentality. On Florida Mountain, roads changed constantly as new claims opened and others closed. Visitors to the mountain in 1870 described it as sterile and denuded. Already old road scars and slag heaps created a desolate appearance. Toll roads were built to new mining operations, connecting them with established camps. Roads to the

new cross-cut tunnels on Florida Mountain were reported in the late 1870s Avalanche newspapers.[14]

The Owyhee County commissioners laid out formal road districts in April 1882. District #1 included the Silver City area, but well into the 1890s these roads were private ventures. They usually remained toll roads leased to whoever provided the lowest bid.

Even under the best of circumstances, the paths in and out of Silver City had serious natural obstacles. The elevation meant a colder climate. Today dirt roads keep Silver City isolated from the first snowfall through the muddy conditions of April and May. Silver City and the Carson Mining District had the characteristics of a high desert climate.[15]

Reynolds and Sinker Creeks provided paths into the general area but it was Jordan Creek that provided a narrow defile for townsite locations. Boonville, Wagontown, Silver City, and DeLamar spread along the creek sides in the narrow valley. Long Gulch bisected Jordan Creek running east to southwest. Florida Mountain stood west of town. One journalist described Florida Mountain as viewed from Silver City:

> The circumference of this grand old mountain...is about nine miles. In summer its sides are covered by grass, while in winter it is covered by snow, which in some places drifts to a depth of twenty and fifty feet....Its sides seem to be punctured with tunnels and prospect holes, some started years ago and abandoned and others of recent date, made by the sturdy prospector or miner...[16]

The description aptly summarizes the physical changes that mining imposed on the mountain. Amid all the changes, it is difficult for present-day visitors to detect earlier forms and patterns. Yet historic photographs and the current built environment reveal certain geographic features, most obviously the nucleated settlement pattern. Silver City was located as close to War Eagle Mountain, and Boonville and DeLamar were located as near Florida Mountain as topographic conditions permitted. A scattering of houses and buildings existed as headgate communities at mine entrances. These, in turn, were linked to stamp mill sites, which often included a few domestic dwellings. Far less obvious than surface settlement patterns are the pathways created by underground mining tunnels. The accretionary features that altered the landscape—rock dumps and ore piles--can be charted through maps and photographs, but the tunnels remain mysterious and unstudied. Richard Francaviglia describes the significance of these dark, inner landscapes:

> For every feature we see above ground in the landscape of light, there is an arcane, almost mythical world beneath the surface that was only revealed to the public by vivid

> descriptions and somber candle-lighted (or lamp-lighted) photographs. The layout of underground pathways is dependent on the geological structure and prevailing methods of ore extraction. A diagram of the underground workings ...simultaneously documents the operation and awes the uninitiated, for the typical mine is a three-dimensional system resembling several street maps placed on top of one another.[17]

All mining communities, including those in the Carson District, went through periods of growth and geographic change. Stratification along class and ethnic lines developed. In its boom period, Silver City grew from 170 major structures in 1870 to approximately 215 buildings in the 1890s.[18] Charting these changes in the built environment is outside the scope of this report, but the creation of separate Chinese quarters and concentration of architecturally distinctive homes are two obvious examples of the stratification process. In the mining camps themselves, the mine supervisors lived in nice homes, and workers shared quarters in boardinghouses. Meals also served as delineation points--mining supervisors and engineers ate together, separate from the day laborers.[19]

Chinese Miners on the Mountain

The general relationship between white and Chinese miners is well documented in histories of mining in the West, in Idaho, and in the Silver City area. These histories show that white miners initially excluded Chinese miners from newly organized mining districts. When the mines played out, miners usually changed the rules and then sold worked-out placer claims to the Chinese. Chinese miners reworked abandoned claims, using more patience and sometimes more capital than their predecessors. Chinese miners typically were not hired to work alongside white miners in hard rock mines.

The Florida Mountain pattern conforms to this general pattern. Placering around Florida Mountain was a viable activity only while the snowmelt provided sufficient water to work the claims. Local newspaper writers usually reported it as a sign of spring that Chinese miners had gone to work their "diggings" in Jacobs Gulch. The only other references to Chinese people on Florida Mountain were as boardinghouse cooks. Chinese cooks (mostly male) were paid less than white women who held the same job. None of the evidence from census, newspapers, payrolls, or personal recollections suggested that any Chinese miners worked as wage laborers in Florida Mountain's hard rock mines.[20]

Census reports from 1870 through 1920 indicate that Chinese residents of Silver City worked as wood choppers and dealers, cooks, laundry men, merchants, hotel porters, and farm laborers. Some Chinese women were prostitutes. Uniquely in 1900, census records identify the occupants of the "Florida Precinct," which included Florida Mountain. At the time, the Black Jack and Trade Dollar mines had mills and boardinghouses located near mine entrances. Small clusters of dwellings were situated near the boardinghouses. From a total population of 169 people counted in the precinct, only four were Chinese. Three were cooks and one was a laundryman.[21] Except for such servants, then, and spring-time placer miners, Chinese inhabitants on Florida Mountain would be rare and unusual. Census reports from other precincts, particularly the Silver City precinct, show that the Chinese resided in town, where they lived in an ethnic enclave separated from the white residents.

Transportation Corridors: Wagon Roads

Besides climate and extreme topography, Florida Mountain's isolation from supply centers contributed to the difficulties of its miners. The paths in and out of a mining town measure the obstacles of sheer distance and the need to forge links to emerging urban centers. Today travelers think of the Silver City area in relation to its 70-mile distance from Boise, the 26 miles to the Owyhee County seat of Murphy, or the 30-mile drive to Jordan Valley, Oregon. Distance translated to driving time is a twentieth-century concern. In the 1860s time and distance mattered, but sources of supply were considerably more far-flung. The location of Florida Mountain in the Owyhee Range placed it between the Northwest's most important economic centers--Portland, San Francisco, Salt Lake City, and Denver. Regional economic growth and competition would dictate what transportation routes would serve these centers.

Distance was only one obstacle; altitude was another. Florida Mountain's elevation at 7,784 feet was only about 1,600 feet higher than the high and narrow mountain valley of Silver City proper. Steep and difficult climbs and grades would make road building an engineering feat. In the beginning it made the most sense to follow the water courses. A natural progression followed: native people followed game trails; wagon roads followed the same routes. If grades were not too steep, railroad beds might follow the same routes until the engine whistle gave way to the horn of automobile traffic.

Native peoples followed the river; so would the first emigrants who came along the south side of the Snake River, experiencing the dry conditions of the Oregon Trail's South Alternate. Their orientation was always west. Making their way to the crossing near Fort Boise, they traversed the creeks that lead into the Silver City area, Sinker and Reynolds creeks. Sinker Creek flowed south and west while Reynolds Creek was more southerly. In the early 1860s, gold, silver, and mining equipment moved along the Oregon Trail to Portland. Later, steamboats along the Columbia River would speed the process. Finally, steamers could complete the journey to the mint in San Francisco. This route soon competed with a more westerly overland route through Nevada to Chico, Sacramento, and on to San Francisco.

As the importance of the Owyhee mines grew, businessmen searched for a cheaper, more direct route to California.[22] In 1864–65, two rival overland groups contended for the mail and passenger traffic out of the Carson District to California. The winter snows in the Blue Mountains and the ice in the Columbia River spurred efforts to develop an all–weather route. Two contending routes, constructed at considerable expense, ran from either Chico or Red Bluff through the Sierras to Susanville, Califomia. There they both connected with a federal wagon road that came from the Humboldt mining district in Nevada. Finally the route followed the Humboldt River through Nevada to the Owyhee Mountains, a distance of 260 miles.[23]

While the Chico route won out over Red Bluff as the western terminus, Chico was supplanted in 1867 by Hill Beachey's Railroad Stage Line. The Railroad Stage Line's route followed the California portion of the Oregon Trail to present-day Winnemucca, continued to the Owyhee River drainage, then up Reynolds Creek to Silver City.[24]

Hill Beachey operated the first stage line between Boise and Silver City. The elevation required several changes of horses at stage stations. Meals and overnight accommodations were available on the fifty–mile trip. From Silver City, a freight wagon would take travelers to Boonville, DeLamar, and the Flint Mining District to the south.

Railroad Corridors

Railroads eventually created a more reasonable and affordable system of regional markets and supplies connecting Silver City to Portland, San Francisco, Salt Lake City and the rest of the country. Prior to 1869, the nearest railhead to the Owyhee mines was Ogden, Utah. Once the Transcontinental Railroad's final link was forged in 1869, closer railheads were located at Elko and Winnemucca, Nevada. The Oregon Short Line's whistle was first heard in the Idaho Territory in

1874 as a narrow gauge track was extended from Ogden, Utah, to Franklin in southeastern Idaho. By 1878, the track extended to Nampa in southwestern Idaho. This meant cheaper shipping costs for Owyhee ore supplies and equipment. With Nampa railroad connections only fifty miles from Silver City, the more expensive shipping costs from Elko and Winnemucca were eliminated. The Oregon Short Line reached Huntington, Oregon, by 1882. By 1884, when the railroad ran trains regularly through southern Idaho, the trip from Omaha to Portland that once required six months along the Oregon Trail now took five days. Carson District bullion could now easily reach distant markets.[25]

In 1889 a spur line connected the Oregon Short Line's Nampa terminal across the Snake River to Murphy. A proposed extension to Silver City was never completed. At this point the railroad was only twenty miles from Silver City. These developments came as the national market for silver suffered a downturn in the 1890s.[26] The stage line from Murphy to Silver City operated into the twentieth century, proof that only in a prosperous economy would railroad technology conquer distance. The Carson District existed because of the demand for precious metals. Once-rich silver veins played out, national demand declined, and markets disappeared. Boonville (renamed Dewey), Wagontown, DeLamar, and later Silver City all shut down.

Entrepreneurial Capitalists

Mining developments in and around the Carson District show the influence of risk-takers. Quick profits and the general lure of money, of course, attracted a whole range of people to western mining camps. In the development of Carson District mining, several individuals stand out: William Knott, John F. Sullivan, William H. Dewey, Michael Jordan, Joseph R. DeLamar, and Peter Steele.

Local newspaper reports were one of few sources that reveal information about independent miner William Knott. Reporters' frequent descriptions gradually painted a stereotypical image of Knott as a grizzled and eecentric old miner. "We believe," said one reporter, "that he arrived in 1869. He cuts comers and doesn't pay his debts, but is quick to sue when he perceives that he himself has been slighted. He takes no one into his confidence, but trundles his equipment about the mountain, casting his 'eagle-like eyes' upon it, looking for the bonanza he knows awaits him."

Knott's fate was that he sold the big bonanza--the Black Jack--and watched others collect its wealth. Silver City boosters regarded him as stubborn because he held his property "idle when it

could have been worked." Knott violated mining community expectations that claimants with good prospects should do whatever necessary to develop claims, employ people, and thereby help the local economy thrive. Eventually his name disappeared from local records, and he faded into obscurity.[27]

John F. Sullivan was born in Steuben County, New York, and lived in California eleven years before making his way to Idaho and Silver City. Apparently he made good money hauling timber to the stamp mills around Silver City. His major activity, however, was placer mining.[28] Sullivan worked placers near Jacobs Gulch from at least 1868 to the early 1900s. His individual placer claims are difficult to reconstruct but he also lode mined on Florida Mountain over the years. He worked the east side of the mountain with his partner, Robert Morrison. He later became part owner with Isaac Phillips of the Phillips and Sullivan mine. After this partnership dissolved, he became part owner of the Molly Pitcher. He continued to develop his placer claims and expanded into milling operations. Sullivan's activities are described in more detail elsewhere in this report, but his career is an indicator that miners who were "self-made" could achieve success in the Owyhee mines without large eastern capital.

William H. Dewey's life offers a case study in the risk-taking adventures of capitalism. He was born in Massachusetts on August 1, 1823. He ran away from his family's New York farm at age eleven. He drove mules that pulled the keel boats on the Erie Canal and before long owned two freight boats. From a canalier, he became a livery man and operated a freight business; later he owned a saw mill. The California gold rush lured him west to California via the Isthmus of Panama. In 1850 he settled in San Francisco. There he met Michael Jordan and eventually they formed a partnership. That partnership eventually brought Dewey to the Owyhee mining country in 1862. Dewey platted and promoted the town of Silver City. His development of claims on Florida Mountain acted as a catalyst for the area's mining boom. Dewey's later investments in real estate, Central Idaho's Thunder Mountain mines, and railroads revealed an uncanny ability to invest when prospects were good and divest before losses ensued. Dewey's colorful career, his strongly held opinions, his shrewdness and occasional mishaps in gunfights made him a legendary entrepreneur--a former eastern farm boy who succeeded in western mining.

While Dewey was an easterner who came West and achieved great wealth by Idaho standards, Joseph DeLamar was a foreigner, born in Holland in 1843. When he died at his New York estate in 1918, he was fabulously wealthy by any standard. DeLamar's activities in the

Carson District include his 1886 purchase of the Wilson mine at Wagontown and the purchase of the Cosmos mill (later the DeLamar mill) less than six weeks later. In 1889, he moved his mill to a new location northwest of Florida Mountain and founded the town that bore his name. At the DeLamar townsite, he experimented with electric power and had his miners build a new tramway. Most of his investments yielded handsome profits and the town of DeLamar prospered. In 1891 Joseph DeLamar sold two-fifths of his Owyhee investments to English capitalists for two million dollars, it was the largest sale to date in American mining. DeLamar had made $1,400,000 from the mines and then sold out for an additional two million. The towns of DeLamar and Silver City were the only two Carson District mining communities that lasted until the beginning of World War II.[29]

Peter Steele was a twentieth-century Florida Mountain entrepreneur. Steele, born in 1865, came from Scranton, Pennsylvania, where he first worked in the coal mines. He served an apprenticeship as cigar maker and at age twenty-five went to California. There he worked both as a cigar maker and a miner. Like many western miners, Steele followed new strikes as they were developed. In 1899 he went to Wallace, Idaho, and in 1901 he arrived in Silver City. He established a cigar factory there, and began to invest in area mines. Steele organized the Banner Mining and Milling Company in 1905 with local and midwestern investors and purchased the Banner Group of mines on Florida Mountain.[30]

Steele continued to promote Florida Mountain mines long after major mining companies had abandoned the area. In 1923 Steele organized the Empire Mines Company to combine the Banner Group with former Trade Dollar Consolidated properties. He worked tirelessly until his death in 1938 to promote and develop his Florida Mountain mines. Though not as financially successful as the early entrepreneurs, Peter Steele helped the local economy survive the lean years.

The International Silver Market

When Owyhee miners first began shipping silver bullion, national and international governments were the main buyers. Governments used silver to manufacture coins and bought it without regard to what country it came from. When the demand for silver declined, it deeply affected the development of Owyhee mines.

Rich silver strikes in the Comstock, the Coeur d'Alenes and other areas of the American West provided the world with a surplus of silver. The surplus drove down prices. Silver producers

agitated for changes in U.S. government polices that would secure their market. Between 1873 and 1893, their efforts failed, despite support from powerful western senators of "silver" states. In 1873 the United States officially went off the bimetallic standard by which money's value was defined. Gold became the only standard that the U. S. (and other countries) used, instead of both gold and silver. In 1893 the government repealed the 1878 Brand-Allison Act and the 1890 Sherman Silver Purchase Act. Both acts had directed the U.S. Treasury to buy specified amounts of silver every year. The government of India suspended free coinage of silver as well. Silver prices dropped to a historic low of sixty cents per ounce.[31]

The bad news had an immediate impact on the Carson District. Mining companies, such as the one operating the Black Jack on Florida Mountain, had enough capital reserve to support continued operations. Others closed temporarily to await an upturn in prices. Still other companies reacted according to the relative percentage of gold and silver values in their mines, unaffected if they mined more gold than silver.

As the twentieth century progressed, the U.S. government began to subsidize silver producers. The silver market shifted from coinage to industries producing photographic, electronic and radiological supplies. Nevertheless, silver has continued to be a surplus item, much of it produced as a by-product of copper, zinc, and lead mining.

Fluctuating silver prices always have affected mining operations, whether on Florida Mountain or elsewhere. Along with changing federal laws, they help explain temporary work stoppages, the reluctance of capital to invest in mining "low grade" ore after 1900, and the resurgence of mining in the 1970s when open-pit and heap-leach recovery methods made silver and gold mining profitable again.[32]

Mining Technology

The basic outfitting for any mining prospector has changed little since the 1860's--a pick, pan, flask of quicksilver, and cheesecloth. These were still recommended in mining handbooks published in the 1930s. In the 1935 edition of the Thirty Seventh Annual Report of Mining Industry of Idaho, E. D. Gardner describes gold prospecting equipment needed: "A pick, a long handled round pointed shovel, a gold pan, and a prospector's pick are indispensable....A single-jack hammer with two or three moils will come in handy for taking samples and loosening rock found in making cuts."[33] These descriptions and observations are also a useful reminder that

technological change is often uneven and costly. Low mineral prices and economic depressions can necessitate using simpler and cheaper methods. On Florida Mountain, with its plethora of small mining claims and the difficulties of achieving consolidation and economies of scale, older hand methods of prospecting, extraction and processing coexisted with the latest technological innovations.

Early Carson District prospectors started with simple equipment and did their own assays in the field. An 1890s' mining handbook explained how to conduct a simple field assay: "When gold is suspected in quartz, but there is visible to the naked eye more or less, iron, copper, and other base metals, it is well to crush the quartz into coarse fragments. Toast on a shovel or other convenient tool over a hot fire, and finally pulverize in the mortar." The pulverized quartz was passed through cheesecloth, then mixed with mercury. When swished around a pan, the amalgam revealed gold. In the 1890s more tools were used, including an iron mortar and pestle, scale, 40-mesh sieve, burro furnace and muffle, a cupel mold, scorifiers, tongs, annealing cups, spirit lamp, test tubes, pouring mold, borax and soda, bone ash, granulated lead, nitric acid, hydrochloric acid, sulfuric acid, ammonia, alcohol, and granulated zinc.[34]

However, early miners discovered that Florida Mountain ore bodies lay in deep, parallel fractures. Major successes came only to larger operations that could consolidate and achieve the degree of capitalization to access the ore through many long tunnels. Advances in drilling technology had a major impact on mining on Florida Mountain. When W. H. Dewey purchased the Trade Dollar, Blaine, and other claims and drove a long tunnel to the Black Jack lode, he used the latest machine diamond drills. While earlier versions of the diamond drill were used on the Black Jack mine as early as 1878, The Owyhee Avalanche described the new Sharpneck diamond drill invented in 1888:

> ...[A] simply constructed little machine, consisting only of a rotary engine cylinder, four by seven inches outside diameter, the shaft of which is a hollow steel tube made in jointed sections so it may be shortened or lengthened as desired. The end of this tube or shaft is set with diamonds, same as the diamond drill in ordinary use, except that the manner of setting has been improved...The inventor claims that in constant practical use it will bore a hole in hard granite one foot deep in four minutes...[35]

Drilling innovations followed changes in blasting techniques. Dynamite was invented in 1867. When Alfred Nobel stabilized nitroglycerin by surrounding it with sawdust and placing it in

tubes, black powder was a thing of the past. Dynamite was relatively stable, could withstand normal mistreatment, and could be precisely placed and calibrated to the size and toughness of rock. Dynamite, combined with the advances in mechanical drilling, made mining of lower grade ores in Florida Mountain feasible.[36]

The movement of men and materials also improved. In general, there was steady improvement in hauling and hoisting methods. Many of the improvements originated in the Comstock Mining District in Virginia City, Nevada. There mining engineers developed transportation and stabilization techniques. On Florida Mountain, as was true elsewhere in the Owyhee mines, the level of hoisting works depended on size. Simple, hand–powered windlasses with an ore bucket and rope operated by a hand-powered winch persisted for several decades. As operations grew, steam-powered hoists with cages or "skips" for conveying men and metal were introduced.

Inventions and innovations in milling also rapidly improved processing techniques. Again, newer technology existed side by side with older technologies like the Spanish arrastra. Here a rock–lined circular pit with a center pivot used horses to drag a slab of rock over the stone pit to crush the ore. As late as 1902, Florida Mountain miners used an old arrastra to crush ore. This simple method persisted into the twentieth century, but bigger operations relied on stamp mills. These mills used a process which was a magnified and refined version of early field assays. Stamp mills, however, used more advanced crushing techniques. A number of pestles (stamps) rose and fell, usually in combinations of five, crushing the ore and providing greater recovery rates. In more expensive operations rock breakers broke up the ore before it went into the stamps. Most mills used water in the pulverizing process, but some used a dry crushing process where the ore was heated in a roaster or kiln prior to crushing. While recovery rates were higher, often above ninety percent, stamp mills were an expensive investment. The first stamp mill in Owyhee County cost over $100,000 just for the equipment.[37]

This recovery process also involved intensive use of numerous chemicals. Up to 1894 in Florida Mountain mills, the ore was washed across a mercury–covered plate, separating the amalgam from the crushed rock. The amalgam was then heated to draw off the mercury. The bullion could then be assayed, shaped and molded. Concentration techniques improved after 1894. By 1905, the chemical amounts used in one month by the Trade Dollar Consolidated mills were impressive. In September the Black Jack mill used 7,000 pounds of salt, 1,800 pounds of blue

vitriol, eight cases of concentrated lye, ten pounds of cyanide potassium, thirty pounds of caustic soda, and eight flasks of quicksilver. The Blaine mill required 4,320 pounds of salt; 1,976 pounds of blue vitriol, fifteen cases of concentrated lye, 360 pounds of caustic soda, 100 pounds of zinc, over eleven flasks of quicksilver, and two pounds of chloride of lime. The intensive use of chemicals that separated gold and silver from lower-grade ores created a substantial potential for environmental degradation.[38]

As production increased on Florida Mountain in the 1890s, new and revitalized stamp mills were located nearby. In 1891 The DeLamar mill expanded the old Cosmos Mill from twenty to forty stamps. The Black Jack Mill also started operating. Others soon expanded or opened operations: the Trade Dollar Mill in 1892 and the Florida Mountain Quartz Mill at Dewey in 1896. Later, balls, rods, rollers, and gyro crushers replaced earlier stamps and lead to improved crushing techniques.[39]

Electrical Power

Many technological changes pale when compared to electricity's impact on Florida Mountain. The new Swan Falls power plant, constructed in 1901, provided the first hydroelectric power to the mines. This was the most important single technological development for the Owyhee mines. Before electricity, water power was available only a few months a year in the creeks. Steam to drive the mills and hoisting equipment depended on huge quantities of wood. The wood soon disappeared, and the price of coal, sometimes hauled from as far away as Wyoming, was prohibitive. The Trade Dollar Mining and Milling company spent approximately $50,000 a year on fuel costs by 1900. All of this changed with electricity. The age of electricity meant that hoisting works, machine drills and water pumps could rely on air compressors and motors driven electrically. The blacksmith shop could also take advantage of more advanced electrified machines.

Twenty–two thousand volts of electricity traveled the twenty–seven miles between Swan Falls and Dewey. From there the Trade Dollar distributed it to the mines on Florida Mountain. Between 1901 and 1908, the Trade Dollar built eleven miles of branch lines to the Black Jack, Banner, DeLamar, and Rich Gulch mines. The electrical power, much less expensive than steam power, drove air compressors, power drills, pumps and stamp mills. It provided light to the mines and to the towns of Murphy, Silver City, and Dewey. By 1904, electric trolleys had replaced mules in hauling ore from the larger mining operations.

In July 1904, the Silver City Nugget reported on the new trolley service between the Florida Mountain mill at Dewey and its terminus deep in the granite of Florida Mountain, 1,700 feet beneath its summit. "Its cars are not sumptuous and the line cannot boast of the scenic beauty of the route as the cars are only made to haul the product of the ledges in the Trade Dollar Consolidated mines and except for a headlight on the ore cart and an occasional electric spark from the trolley, the line is one of total darkness." The mules which had previously supplied the power had been sold; now the waters of the Snake River flowing through turbines at Swan Falls were providing the same service. All agreed that the line, constructed under the supervision of electric engineer, Mr. Faro, was "working most satisfactorily and doing efficient and cheaper service than did the patient mules." [40]

CHRONOLOGICAL OVERVIEW: FLORIDA MOUNTAIN MINING

Florida Mountain Placers: 1862-1865

Prospectors in the Boise Basin, located north of the Snake River, had heard rumors of gold nuggets in streams running through the Owyhee country. In the spring of 1863, a man named Michael Jordan led a party of twenty-nine prospectors into the area. The group crossed the Snake River near old Fort Boise and proceeded to Jordan Creek and surrounding gulches, where they found gold. The men established the Carson Mining District, naming it after one of the party members, William T. Carson. They set up rules and staked claims, allowing three per person. They called their settlement on Jordan Creek "Happy Camp." Some members prospected the mountains above the streams and soon located ledges on War Eagle Mountain, naming them Whiskey Gulch and Oro Fino.

By 1864 word of the strikes had traveled, so thousands of men followed the early claimants into the Owyhees. They soon collected the "easy" placer gold in Jordan Creek, Blue Gulch, Jacobs Gulch, and Coffee Gulch. Placer claims were located on Rich Gulch and other gulches on Florida Mountain's west side.[41] Someone located the Poorman ledge on War Eagle, then the Morning Star. Assays on the ores showed them to be richer than those of the Comstock. Investors from the West Coast and New York soon forwarded capital to develop the mines.

William H. Dewey arrived in camp during this period. He and Michael Jordan had been partners in San Francisco during the 1850s, where the two contracted to dig trenches for the city's

first sewer lines. With their stake they went to Virginia City, Nevada, planning to sell old mining claims and mining stock. Their plans failed when they were unable to sell their array of investments.[42] In 1862 they were broke and decided to leave. Jordan headed for new strikes in North Idaho, but Dewey stayed behind, suffering from an attack of malaria.

After he set up camp in the Owyhees, Jordan wrote to Dewey and urged him to come to the Owyhees right away. Dewey, without funds to buy a horse or travel by stage, reportedly walked the entire distance in 83 days, carrying a pack and $27. He arrived at Happy Camp in November 1863.[43]

While Jordan attended to mining developments--until his death in an 1864 Indian conflict--Dewey built a toll road between Ruby City and Boonville, two of the settlements that had sprung up in the area, and began a toll road to the Snake River. Finding himself too late to dominate the real estate market in the two little towns, he created a new one. He selected the townsite of Silver City, platted it in 1865, and opened for business. The site proved felicitous. Settlers abandoned Ruby City, and Silver City became the new county seat.

With the creation of stock companies, the 1865 construction of the Lincoln mill, the employment of wage laborers, the development of roads and a freighting industry, the growth of family life and social institutions, Silver City grew. Mills ran day and night, and the town bustled. War Eagle gold and silver fueled it all.

Prospectors Explore Florida Mountain: 1865-1874

While War Eagle Mountain dominated the economic life of the Carson District, many prospectors filed and traded claims on Florida Mountain. Some of them may have set up tents or camped in rough shelters as they searched for ledges or worked placers, but no permanent communities were settled. The remains of two stone cabins presently stand near the mountaintop. Except for two conflicting accounts as to who built them and when, (both supplied by non-witnesses many years later), the contemporary record does not identify them. Kinton Stevens' memoirs say that Michael Jordan may have helped William Dewey build one of them around 1865 as a place from which to guard Dewey's nearby Empire State claim. Wilma Lewis Statham, the daugbter of a miner born in Silver City in 1876, said her father believed one of the cabins was built by William B. Knott and the other by William Dewey. Statham's father also believed that Knott was the "true discoverer" of Florida Mountain gold, which conforms to other indications that Knott was one of the earliest of Florida Mountain prospectors. Though both accounts probably contain

kernels of truth, inconsistencies make it difficult to determine their complete reliability. Michael Jordan died in 1864. Though Dewey invested in several early mining claims at the base of Florida Mountain, he did not locate the Empire State claim on its eastern flank until 1880. Statham's account dates the second cabin as built by William Dewey and Michael Donnelly in 1885, but no extant record mentions such an event. The 1880 Avalanche says Dewey built a "house for the winter" near his Empire State claim, but gives no further information.[44]

The 1870 census aggregated settlements into the "Boonville Mining District," "Silver City Mining District," and "Ruby City." These three areas contained 1,632 people. Nearly half of them were foreign born; 388 of these were Chinese. At that time William Dewey lived in a house near Boonville, about a mile from Silver City, with his wife, Mary, and their eight-month-old son, Edward.[45]

Some early residents became wealthy during the War Eagle's first rich decade. Men such as John Catlow, John Cassell, and George Grayson made fortunes and left Idaho to lead the life of "capitalists" in San Francisco. That city had become a center for bullion purchase, banking, deal-making, stock trading, and stock-price manipulation. These men speculated in Florida Mountain claims and established relationships with other Silver City miners and business people.[46] Deed and mining claim records for the 1860s and part of the 1870s are missing and presumed lost in a courthouse fire in 1884, so the extent of claim locations and trading is difficult to know.[47] Nevertheless, retrospective newspaper articles occasionally allude to claims dating back into the 1860s.

Even when claim and deed books are available, they do not always account for the financial interests a given individual may have had in any one property. Not all transactions were "on the books." When comparing accounts from the Idaho Avalanche with extant deed and location filings, it becomes obvious that many miners had complex financial affairs and juggled activities and properties. They formed partnerships for a percentage interest in one property, and had different partners for other properties, all the time holding exclusive possession of some claims, and perhaps leasing others. When one property seemed to beg for development, a miner might sell his other pocketful of claims to finance it. Men like John F. Sullivan worked placers for part of the year, then prospected or superintended their own claims when they found "good ore" in a vein. Without resources, some prospectors worked temporarily for wages.

William Knott was one of those prospectors managing a variety of enterprises. He arrived in Silver City early enough to be regarded a "pioneer" by 1877 and stayed to win and lose a series of small stakes, ever hopeful that he would find a vein that would propel him into real wealth. Stubbornly convinced that Florida Mountain would eventually yield a treasure, Knott mined placers, traded claims, and did development work. Sometimes he hired others to help work his claims, as at the mine he named the "Silver City." Early deed records from 1871 indicate that John Cassell and George Grayson "conveyed" the Silver City claim on Florida Mountain to Knott. Knott eventually earned a reputation around town as a man who didn't always pay his workers, and his enterprises frequently landed him in court one way or another. Extant deed books connect Knott to his most valuable find, the Black Jack ledge, in February 1871.[48] Cassell and Grayson would later play an important role in developing the Black Jack.

Florida Mountain development work during these years consisted of digging prospect pits, cutting exploratory trenches, or sinking shafts along promising ledges. In 1898, Waldemar Lindgren, a mining geologist working for the U.S. Geological Survey, saw several trenches and observed that these could sometimes expose a vein that showed no surface outcrop.[49] It was all hand work, performed with powder and hand steel. If an owner found good ore, he had it assayed and then calculated whether the ore would pay enough to open the mine. He needed to collect money to buy timbers, hire laborers, contract ore haulers, and build a quartz road between the mine and a mill--all these being necessary overhead to make a ledge pay a profit.

"Home Muscle" Opens Florida Mountain: 1875-1880

October of 1874 was the beginning of a boom time in Virginia City, Nevada. The Consolidated Virginia and California mines struck a fabulous bonanza at the 1500-foot level. Stock prices shot up, and stocks were bought on margin at very high prices. A panic ensued and the Bank of California collapsed. That bank had been the main financial support of the War Eagle mines, which closed, one by one, in the summer of 1875.[50] Many were eventually sold in Owyhee County tax auctions.

The collapse of outside capital ushered in a period of "home muscle" mining on Florida Mountain, a period in which local miners drilled their way into the mountain, using hand methods, digging their pay and profits month by month and year by year just enough to sink another shaft, drill another cross-cut, and haul another load of ore to the mill. Their explorations eventually

demonstrated to "outside" capital that liberal investments could make the mountain pay much bigger dividends.

Silver City area prospectors explored Florida Mountain with new interest. Some of them took advantage of a new mining law, which allowed them to relocate claims that had lain idle for a year or more.[51] They began to find what they were looking for.

One find was at Leviathan Gulch. Elisha Lewis, owner and operator of the Leviathan claim (on Florida Mountain's eastern slope), drove a shaft 100 feet in September 1875, and began stockpiling paying ore until he had enough to haul to Leonard's Mill.[52] Such crushings occurred intermittently, and paid anywhere from $35 to $150 per ton. The Idaho Avalanche editor listed the expenses for mining and milling. The following list hints at what kinds of results were required to profit not only from the Leviathan, but any other Florida Mountain prospect:

COSTS	
Mining the ore:	$768.00 (for 192 days at work at $4 per day)
Hauling ore to mill:	213.00 (at $4 per ton)
Crushing the ore:	798.75 (at $15 per ton)
Assaying the bullion:	16.50
Other expenses:	27.00
Total Costs:	$1,823.25
YIELD	
Tons of ore mined:	53 1/4 (approximately)
Bullion yield:	$2,724.73 (at $51.41 per ton)
PROFIT	$914.67 [53]

With variable bullion yields, it was hard to accumulate investment capital. Even with good ore, an owner had to decide sometime in the fall if he could finance a winter operation. He had to buy and store six month's worth of timber, food, tools, hay, and other supplies before snow made the roads impassable. If an owner could continue, he built an ore house to stockpile ore and built or moved residences near the mine entrance for himself or his laborers. In good ore, he sometimes hired two shifts of men.[54] Such settlements were quite small and were often vacated during the winter.

William Knott began working his Black Jack claim in 1875 by leasing it to Ole Jackson and later to Elisha Lewis. Lewis took thirty-five tons from about fifty feet below the surface and ended

up with a bar worth just over $1,000.[55] Knott persisted, as did Lewis at the Leviathan, and the two properties sometimes were the only encouragement in a town where whole groups of miners left at once, disgusted with missed paychecks from War Eagle owners trying and failing to reopen.[56]

As development progressed, the shape and relative locations of the major veins in Florida Mountain became less and less of a puzzle. Students of the mountain gradually understood the parallel and north-south orientation of the lodes. Schemes for digging long tunnels were floated. If a "master tunnel" could pierce the mountain low enough to cut through the many parallel veins "at depth" where the ore was probably richer, it could reduce the expense of mining each of them. Further, at lower elevations on the mountain were potential mill sites. If mills were situated at the mouth of tunnels, costly trips on the quartz-hauling roads could be eliminated and the difficulties of winter overcome. Also, modern mills could reduce the percentage of precious metals that escaped in the mill tailings.

William Dewey began to see the logic of buying up claims which he suspected were sections of the same lode now held by different owners. More than any others who might have been "big picture men" on Florida Mountain, Dewey was able to realize his plans. In 1877 John F. Catlow and John F. Cassell, operating from San Francisco, returned to examine the new finds on Florida Mountain. The group was taking care of the preliminary business of acquiring the right claims.[57] They talked to William Knott, who had recently "struck it rich." He found a particularly rich streak in the Black Jack lode, rumored to pay a dollar a pound. He then sold the Black Jack to William Dewey, Catlow, Cassell, and others.[58]

The new owners poured money into the mine. They built a boardinghouse, hired twenty men, and in eight days installed a steam-operated hoist over the shaft. This probably was the first steam machinery on Florida Mountain, and as such, was a technological landmark. The men had stockpiled over 200 tons of "good ore" by mid-December. The owners watched the ledge widen to seven feet and were exceedingly sanguine about the future.[59]

One additional find on Florida Mountain set the stage for future prosperity. In October 1880, William H. Dewey located the Empire State claim. The vein lay just west of the Black Jack, but was approached from a lower elevation.[60] He quickly mined and milled about thirty-five tons of ore, which yielded between $80 to $100 per ton.[61] He built a "house" near the mine and prepared to work during the winter to open it further, stope, and haul ore to the mill.[62]

In January 1881, twenty-five men were busy at the mine, running tunnels, winzes, and a ventilating raise, sending ore to the mill all the while. The Avalanche reporter, styled "Darby O'Quill," said it all "goes to show that one Dewey is worth more to a mining camp than ten thousand like some we might mention." Counting Dewey's men, about eighty men were spending the winter on Florida Mountain. They lived here without the company of any women, but could obtain "mostly" all they needed from a store a Silver City merchant set up near the mines.[63]

In one year, Dewey developed 800 feet of drifts and tunnels in the Empire State. He opened a second adit "further down the hill" to cut the ledge at greater depth to access the ore. This one, larger than the first, was "seven feet clear," and intended to serve later as the permanent working tunnel for the mine.[64] He had every faith that the Empire State would eventually yield the funds to finance a long tunnel through the mountain and a new mill. Dewey had previously milled ores at the Leonard, Wagontown, and other custom mills.[65]

Glimpses of community and social life on Florida Mountain are rare, but celebrations at the Black Jack illustrate how life on the mountain was simply an extension of "camp" life emanating from Silver City. The first was to dedicate the mine in December 1877. Catlow and Dewey invited several ladies and gentlemen to attend the party. They set out from Silver City in "cool and bracing" winter air, taking advantage of the snow and traveling the three miles on horse-drawn sleighs (which was also the method of choice for hauling ore in winter months--it was faster and cheaper than wagons). The party "took possession of the boardinghouse" for refreshment and then moved to the hoisting house for the ceremonies. Catlow and Dewey had invited "the old pioneer" Mr. Knott to pull the rope and sound the first steam whistle ever to blow on Florida Mountain.[66]

The second party was on July 4, 1878, also at the Black Jack. By now the shaft was sunk below 200 feet, and two levels had been run preparatory to stoping. While the old War Eagle bonanza was on the sheriff's auction block, the Black Jack was shipping bullion bars regularly to San Francisco. The owners also were forming a stock company. With much to celebrate, Mr. and Mrs. Dewey threw another party at the mine and celebrated both the Fourth and the "glorious future" of the mine with food, drink, and dance.[67]

Elsewhere on Florida Mountain, men worked on scores of smaller claims, several near the Black Jack.[68] Many of these paid modestly, and during the next year their owners hauled loads of ore periodically to the mills. The summer of 1879 saw more than 100 men busy there and at the Lone Tree, the Silver City, the Florida Extension, and the Boonville.[69] Then a combination of

litigation and insufficient funds for a winter workforce slowed things down. The Black Jack shut down to await the outcome of quarrels among the mine's backers, who the Avalanche editor called "San Francisco soreheads." The trouble resulted in a more lengthy shutdown and the eventual sacrifice of the mine to a sheriff's sale.[70]

Florida Mountain was gradually helping the area regain some of the population it had lost after 1875. The 1880 population of Owyhee County was still less than it had been ten years earlier, but it was climbing. The balance between native and foreign born tilted toward the former, with 809 native born and 606 foreign born. The Chinese were a significant portion of the foreign born, and now included families with children. Other miners came from Ireland, Germany, Scotland, and other European countries.[71]

Also during this period, Owyhee mining districts became somewhat less isolated from the rest of the world. Between 1869 and 1878, the closest rail connection was at Corinne, Utah. The Oregon Short Line across southern Idaho was completed in 1878, which put a railhead only fifty miles from Silver City. This reduced the cost of freighting and improved the potential of lower grade ore to make a profit.

Technology also was changing. At War Eagle Mountain, some of the big mines reopened with fresh capital. The Golden Chariot and Oro Fino owners acquired the first "diamond" drills to appear in camp, which required fewer people and saved expenses.[72]

Florida Mountain Consolidation: 1881-1899

At the beginning of 1881, most Silver City miners and local residents owned claims to Florida Mountain gold and silver. By the end of 1899, the major veins and many of the smaller ones were owned by one group of eastern capitalists. Lodes were no longer accessed through the minehead shafts sunk by local "muscle," but by long tunnels equipped with rails and rail cars. Ore was no longer sent down the quartz roads to the most handy mill, but crushed at efficient labor-saving company mills. Mining and milling innovations brought new tools and processes.

A chain of events beginning in 1881 led to these momentous changes on Florida Mountain. The Black Jack mine was sold at the Owyhee County sheriff's auction to Jacob Mussell.[73] Within a few months, William H. Dewey acquired the property and planned to superintend it together with the Empire State. In 1882, Dewey was renting the Leonard mill in Silver City. He expected to mill at least 3,000 tons of ore by Christmas.[74] In November 1882, Dewey built a "substantial ore

house" at the Empire State.[75] Dewey knew that the Black Jack vein was about 400 feet east of the Empire State vein, so he began extending the lower tunnel in that direction. Black Jack ores would be stored in a new ore house.[76] By hiring four shifts of men to work six hours each, the tunnel extension hit the Black Jack ledge in early March of 1883 and found "good ore." Dewey drifted along the vein until he reached the adit level of the Black Jack. This connection provided much improved ventilation. He knew that another chute of ore existed nearby that had been too low a grade to mine earlier. The new tunnel now made it profitable to extract this old chimney.[77]

By October, twenty-five men were hired to further open the Black Jack ledge. Dewey built a substantial boardinghouse near the mine to accommodate them. In preparation for winter work, Dewey laid in supplies.[78] Observers comparing the two ledges said that the Black Jack was the larger, but that the smaller Empire State was the richer. Between the two, the mill crushings yielded the capital to continue the work.[79] Only natural forces slowed the miners; spring snowmelt watered the mines and made it impossible to work. Likewise, the roads to the mill were too muddy or covered with winter rock slides for ore wagons. With the ore houses full and no way to transport it, Dewey turned his crews to "dead work." They prepared necessary drifts and other passageways that later were followed by stoping when weather permitted evacuating the ore houses.

William H. Dewey's life took an unfortunate turn in August 1884, when he shot and killed a Silver City bartender named Joe Koenig and was accused of murder. Work at the Black Jack and the Empire State was suspended or portions leased while he was in custody of the sheriff awaiting trial. He was acquitted in May 1885.[80]

A few months later, with lessees still working the mine, Dewey began hauling dirt from the waste dump at the Empire State and running it over sluice boxes set up near the Chinese placer diggings just west of Silver City. This was considered a "new method" of working ore but was said to pay.[81] Near the end of October 1885, Dewey's lessees hit a rich streak of decomposed ore, which may have helped his financial recovery.[82]

Another important Florida Mountain lode was discovered in May 1887. John F. Sullivan and Isaac Phillips, local miners and citizens of Silver City, discovered a quartz outcrop several hundred feet west of the Black Jack and Empire State claims. The newspaper reporter said that the ledge was discovered "under the old Black Jack ore house."[83] The two men each filed a claim, the Sullivan extending approximately between elevations 7,700 and 7,200; and the Phillips, between

7,200 and 7,000.[84] The outcroppings straddled the dividing line between the two claims. The two men operated as partners and developed the mine as one enterprise.

A pair of prospectors, Frank St. Clair and James Douglas, located another lode that would play a key role in Florida Mountain mines' eventual consolidation--the Trade Dollar. Located on the mountain's eastern face at an elevation of about 7,000 feet, this vein was six feet wide, "black with silver," and carried gold as well.[85] This vein turned out to be an extension of the Black Jack.

William Dewey gradually recovered his financial equilibrium as his lessees at the Empire State made exeeptionally rich strikes. These strikes and the new discoveries at the Trade Dollar and Phillips and Sullivan caused Silver City to bustle again. The Avalanche editor said they were "three mines hard to beat anywhere."[86] Men in substantial numbers--and a few women--were living and working on the mountain. At least one Chinese man worked as a cook at the Empire State boardinghouse.[87]

The winter of 1888 illustrates of the relationship between work and weather. When snow covered the roads, ore was drawn by sleighs instead of wagons. This made for faster, easier, and cheaper trips to the mill and back. The snow proved a mixed blessing, as heavy falls and winds could produce twenty-five to fifty-foot drifts. This particular winter more livestock than usual was expected, and the hay haulers of Silver City laid in extra hay for horses and other stock that hauled the ore carts, wagons, and sleighs. Likewise, the stockpiles of wood at the mills (to fuel the boilers) were larger than ever. This winter women dwelled on the mountain, too. William Dewey, his wife and children all moved to the Empire State mine to be "close to business."[88] When spring arrived, the roads needed extensive repairs. Rock slides had to be cleared, and soft spring snow was shoveled off by hand.

William Dewey wanted to develop his properties faster and more systematically than was feasible with his own capital. He finally persuaded a group of Pittsburgh capitalists to finance a large-scale exploitation of the Black Jack and Empire State mines. In 1890 the Idaho and Pittsburgh Mining and Milling Company incorporated in Kentucky.[89] Dewey was a substantial partner in the company. The immediate goal was to construct the long-discussed tunnel that would intersect the Empire State and Black Jack vein (and any other hidden veins along the way) and build a modern mill at the tunnel's mouth. The mill site was in the ravine above where Nigger (now Negro) Gulch joined Blue Gulch. The mill would have ten stamps, an additional boardinghouse complete with a married couple to run it, and a new supply road down Blue Gulch.[90]

The company hired William Dewey's son Ed as superintendent--despite local comments that he was still too young to vote. He erected bunk and boardinghouses, ordered massive quantities of timber and other supplies, and started the tunnel. The tunnel would pass from the rhyolite and basalt into granite, so the company ordered an air compressor to work Burleigh drills. Preparing for a long occupation, the company patented the Black Jack and Empire State ground.[91]
In fall 1890, equipment began arriving for the mill. The building was 80 feet by 120 feet, a "complete gravity mill." The boiler and engines were powerful enough to run forty stamps. The engine was a 125-horsepower Corliss. An inclined track led from the long tunnel's mouth to the mill. The ore was dumped upon a platform fifty feet above the settler floor, dropped through grizzlies to the ore bin, which could hold 125 tons. The Corliss engine had a 14-inch cylinder with a 42-inch stroke; steam was supplied by a 5-feet by 14-feet boiler with a 60-foot flue. Once everything was in place, human hands would not touch the ore after it was loaded on the cart within the mine.[92]

A long cross-cut, five feet by seven feet and later referred to as the Idaho Tunnel, was driven about a thousand feet. The company spent $160,000 developing it. The tunnel had intersected a few veins containing disappointingly low-grade ore. The Pittsburgh management told Ed Dewey to quit driving the tunnel and drift along one of these veins. He did so, but with poor results. The experts advised him to quit. He persisted, detecting a change in the character of the rock. After ten days the drills burst in upon a ledge of white granulated quartz that assayed for $96 per ton. The young superintendent was redeemed.[93]

In 1890 the Deweys bought the Trade Dollar and the James H. Blaine mines, believing them both to be a continuation of the Black Jack lode. Ed Dewey took over their development, working several tunnels at a time on multiple levels.[94] While other parts of the Black Jack were stoped, a tunnel was driven through granite with a Burleigh Drill. The tunnel cut the Phillips and Sullivan ledge on its way to the Empire State. The vein carried better ore than that found in the upper portion of the vein and was twice as wide. This encouraged all the mine owners with claims nearby--and encouraged more investment.[95] In 1891 the company began using a "Rand drill" to drift on one of the hidden veins struck by the cross-cut.[96] This drill was used in combination with powder set for 20-pound charges.[97]

Ed Dewey's father and mother took a trip East, partly to have a "high time" on a chartered yacht sailing to Cuba for a holiday, and partly to promote the Trade Dollar to Pittsburgh money.

William Dewey, now given the honorary title "Colonel Dewey," wanted to finance another mill for the rich ores now coming from the Trade Dollar (east) side of the mountain.[98] He succeeded, and in July 1891 the Trade Dollar Mining and Milling Company was incorporated in Kentucky and took possession of the Trade Dollar, the James H. Blaine, the Black Bart, and several other nearby properties.

One major ledge not yet under the Dewey companies' control was the Phillips and Sullivan. This mine had been producing steadily since it opened in 1887, keeping a mill running fairly regularly. The Avalanche described the mine as "one of the few mines, which in miners' parlance, has been a good poor man's mine. It has paid from the grass roots down, paying owners and everyone connected with it."[99] However, the two owners had a falling out and dissolved their partnership. Their troubles resulted in protracted and costly litigation that eventually closed the mine and placed it under the protection of the court. The judge appointed James Hutchinson, the superintendent of the Trade Dollar in 1895, as receiver.[100] When it was available for sale in 1896, the Trade Dollar Company bought the mine for $25,000 and absorbed it and the Belfast, a related Phillips and Sullivan property, into their operations.[101]

Dewey packaged one more group of claims and enticed eastern capital to finance a third Florida Mountain mill and tunnel. The Florida Mountain Mining and Milling Company was incorporated in 1896 and controlled ten claims: the Seventy-Nine (once owned by William B. Knott), the Boonville, Florida Hill, and others. Organized in Kentucky, the company was capitalized at $1.5 million. The owners had overlapping interests in the Trade Dollar and the Idaho and Pittsburgh. Dewey already had developed a tunnel from Boonville (which he soon re-named Dewey) west in the direction of the Black Jack ledge about 1,200 feet. It would cut all veins north and east of the Black Jack.[102] Dewey bought the hotel, blacksmith shop, stables, and other land around Boonville and prepared to build a 20-stamp mill and all the appurtenances it required.[103]

In November 1896 the Blaine tunnel from the south end and the Idaho tunnel from the north end connected, opening the mountain "clear through." The two tunnels had followed the same ledge at an elevation difference of only eighteen feet. The event confirmed that the Trade Dollar and the Black Jack were the same ledge. The Blaine tunnel had been driven 4,317 feet; and the Idaho, 3,200. This became known as the "1,200" level of the mine, the major working level. Aside from providing great flexibility in working the ledges, the connection greatly improved ventilation. The

tunnel also became a short-cut and convenience for the delivery of mail and communications from Silver City to Florida Mountain mining communities.[104]

As the 1890s progressed, the three companies bought up neighboring claims on the mountain: the Alpine, the Harrison, the Little Chief, the Humboldt, Sterling, Baltic, and Diana, the Fraction, the Caroline, the Owyhee Treasury, and the Twenty-One.

The works underground grew in complexity. A huge station was "cut out of solid granite" midway between the Black Jack and Empire State lodes. In this cavern was installed a 30-horsepower hoist for the convenience of workings below. Men went up and down the shafts in modern cages. Long tunnels were planked, fit with drainage trenches, and suited for mules who could haul six car-loads of ore.[105] The use of electricity was contemplated early in the 1890s as a solution to increasingly expensive wood for fuel, but not installed. Dewey did use electricity to light a hotel he built at Dewey, powered by the mill.[106] The three companies switched used wood instead of coal after an Oregon Short Line Railroad branch was built to the Snake River.[107]

Meanwhile, the mill-site communities expanded. Men with families built small dwellings on the hillside nearby. Children went to school. Most mines had servants and cooks to care for supervisors' residences and miners' boardinghouses. Christmas parties, Fourth of July, May Day and other celebrations occurred at the headworks communities. In 1900 the population of Owyhee County was 3,804. Silver City precinct totaled 976 people, DeLamar totaled 876, Florida precinct totaled 169 and Dewey precinct had 94 people. The Florida and DeLamar precincts were newly organized since the 1890 census. The population was broken down to 3,564 white, two Negroes and 64 Indians. There were 171 Chinese, most who lived in the DeLamar and Silver City precincts. Of the 169 residents of Florida precinct, there was only one Chinese, the rest were white. The majority of the Indian population lived in the DeLamar precinct. The two African-Americans were not listed in any of the four precincts, though local place names (Nigger Gulch, "the old nigger cabin") reflected their onetime presence on Florida Mountain.[108]

In 1899, the three Florida Mountain companies united as one company under the name Trade Dollar Consolidated Mining and Milling Company. According to one account of William Dewey's life, Dewey himself was no longer part of the company, having been bought out around 1896 because of a dispute involving the employment of his son, Ed.[109] The company controlled over forty claims on Florida Mountain and was ready to give up its costly reliance on coal and wood just as the nineteenth century gave way to the twentieth.

Decade of Development: 1900-1910

The first decade of the twentieth century was a transition period for Florida Mountain mining activity. The great Trade Dollar Company exploited its potential in the mountain, then began to close down when ore values declined in 1908. At the same time, other claim owners reprised an earlier period on the mountain when their own hard work was their main hope to accumulate capital. With the complete shutdown of the Trade Dollar's operation, other companies formed to attempt consolidation of other Florida Mountain claims.

The Trade Dollar finally solved its problems with wood shortages and expensive coal costs to fuel its mill boilers. In 1901 the company completed the Swan Falls power plant on the Snake River, twenty-seven miles away. Electric power replaced steam boilers, lit the long mine tunnels (and Silver City streets), and powered compressors, drills, machine shop tools, and other equipment. In 1904 electric ore trolleys replaced mules and donkeys, eliminating another large expense. By 1907 the Trade Dollar was in the business of selling electricity. It had built a transmission line from Swan Falls (the first in Idaho) and eleven miles of branch electric distribution lines to the Black Jack, the Banner, the DeLamar, and the Rich Gulch mines. With electricity, another technological era in Florida Mountain mining development had begun.

The Trade Dollar operations continued as the steady economic base for the town of Silver City and the mill-site communities. Regional towns, such as Nampa and Caldwell, also supplied goods and services to the mine company. The Trade Dollar systematically emptied the mountain of its ore. During 1904, the superintendent worked as many as thirty-six headings. The miners used hand tools in some tunnels and electric-powered drills in others. A Westinghouse Baldwin locomotive pulled eighteen cars at a time and hauled miners in and out of the long tunnels.[110] The large working tunnels were equipped with electricity, but most of the work was still done by candlelight. The maze of tunnels and levels was so complex that the company required an underground surveyor. The tunnel from Dewey intersected the Blaine-Idaho tunnel in 1902. Kinton Stevens' memoir describes close calls when miners became disoriented and lost.

The company recruited miners from Finland and Norway and housed them in the boardinghouses at the millsites. Nearly 500 miners worked for the Trade Dollar, living in boardinghouses at Blaine, the Black Jack, and Dewey (formerly Boonville). Single men paid a dollar a day for board; married men, $2.25.

Jobs generated by Trade Dollar mining activity supported the regional economy and attracted other foreign-born residents. Many came from Switzerland, Italy, Great Britain, Germany, Mexico

and Spain. A majority of the men worked in the mines while women worked as housewives, dressmakers, or hotel workers. Increased demands for supplies generated markets for local farmers. In August 1904, the Tradc Dollar took bids for 48,000 pounds of potatoes, 1,000 pounds of beets, 1,500 pounds of carrots, 5,000 pounds each of cabbage and onions, 4,000 pounds of parsnips, 1,700 pounds of turnips and 1,800 pounds of hubbard squash.[111]

The Trade Dollar continued to buy properties on the mountain when they could be worked in coordination with existing operations. In 1900 the company bought the Tip Top group. The Tip Top consisted of three mines that were opened in the 1890s and soon closed because of low rates of ore recovery. However, the Trade Dollar never proceeded with this plan. The Tip Top, along with other properties, became part of another wave of consolidations that later occurred on Florida Mountain.

While the Trade Dollar dominated the mountain by the twentieth century, it did not possess all of its ledges. John F. Sullivan came to Florida Mountain in 1864 and continually worked several placers and lode mines. He opened up the Phillips and Sullivan mines with Isaac Phillips in the 1880s, then lost them after a dispute with his partner. With Robert Noble, a prominent Owyhee County stockman, Sullivan started developing the Shannon mine (later known as the Lower Nottingham) at the head of Jacobs Gulch. By 1901 John's relative, Harry Sullivan, was working the Ontario veins near the head of the gulch, which were considered to be the source of early placer gold. In 1901 Noble and John Sullivan milled sixty to eighty tons of ore and continued to operate profitably at least until 1904. They sometimes used the Poorman mill, and later, an arrastra. All of Noble and Sullivan's holdings continued operation until Noble's death in 1915.[112]

Another group of mines known as the Banner group also produced well and employed several miners. These claims extended from Long Gulch north to the Tip Top group at the mountaintop. The owners extended its operating tunnel and sent ore specimens to Silver City, showing off their nuggets of free gold.[113] The mine was often compared to its neighbor, the Trade Dollar, and its owners anticipated that it would produce high-grade ore.

These finds apparently encourage outside capital. On March 20, 1903, the Avalanche stated that the Tip Top group was to be sold to a newly organized Tip Top Mining Company of New York. The same sale was to include the Ontario and Banner group of mines. The new group was supposedly planning to construct a "reduction works best calculated to treat the ores." They did not succeed. Two years later, the mines were in the hands of a new company, the Banner Mining and Milling Company. The company was organized by Peter Steele, a Silver City resident who came

there in 1901 and started a cigar faetory. His partners included L.S. Honstad and F. S. Heer of Silver City, John Johnson of Mena, Wisconsin, and G. Schankle of Elmore, Minnesota.[114]

The Banner Mining Company bought the Banner, Coffee, Star Spangle, and Harmon claims on Florida Mountain's southwest flank. They were located 1,000 feet west of the Trade Dollar and Black Jack. In 1907 a stamp mill was constructed at the Banner. The 1909 Report of the Inspector of Mines described the mill:

> The property is equipped with one of the most modern gold mills to be found in the country, being operated by electricity, with separate motors for each department, the current is derived from the Swan Falls power plant, owned by the Trade Dollar Consolidated Mining Company. The process consists essentially of the ore being crushed by four 13,500-pound Nissen stamps, passed over Callow screens, being settled in six Callow tanks, from which the thickened pulp is concentrated upon one wilfley and three Johnson concentrating tables from which the concentrated product is ground in six 6-foot amalgamation pans and then passed to three 8-foot settlers.[115]

The mill closed in 1909 due to low-grade ore, although the owners continued to crush ore at other mills. Local miners kept working the ground, hoping for a future bonanza.

Still another company operated productively on the mountain. In 1905 the Rich Gulch Company was organized in Utah. Capitalized at $500,000, the company built a Chilean mill in 1908 and exploited the wealth hidden under accumulated land slides at Florida Mountain's base. Five years later the local newspaper reported that the mill was "not completed," but still processed ore from the Ontario, recovering "practically all the value of the ore."[116] Although the mill was never finished, probably due to fluctuating capital reserves, it operated and recovered good values for the owners. The company acquired nineteen claims covering about 305 acres.

Rich Gulch became the site of a sizable camp, including a boardinghouse, bunk house, office, and assay office. Towards the decade's end, disputes between stockholders and mine manager A. F. Stevens over stock sales plagued the company. The disputes also interfered with Stevens' efforts to raise more capital: "I have mortgaged my property to raise money for the mine until I am in a position that I cannot raise any more money," he wrote.[117]

The Trade Dollar began reducing its operations in 1907, due to a shortage of ore reserves. The investors realized that the sale of electricity had income potential, and created a new company separate from its mining business. It sold Swan Falls power to Caldwell Power Company, the Boise Interurban, and various mining companies. The Trade Dollar gradually closed its mines. In July 1910, twenty-four men were still listed on the payroll of the Trade Dollar's Dewey Tunnel.

Kinton Stevens remained with the company through 1911, assisting with salvage and surveying as the company prepared to shut down. The company remained in operation, but employed few men. After 1911 the Trade Dollar properties were leased to various companies and individuals for a number of years.[118]

Over its 25-year lifetime, the Trade Dollar surrendered over thirty million in gold ore. Owyhee County led Idaho in gold production from 1903 to 1910, in part due to the Trade Dollar. The Trade Dollar was one of the most extensively developed mines in Idaho, with its lowest level driven to a depth of 1,700 feet. The mine had more than five miles of tunnel and drifts. Other Florida Mountain mines, though producing well, could not make up for the economic impact of the Trade Dollar's closure. Florida Mountain's population dwindled until it no longer was included as a separate census district.[119]

Although the big investors and big equipment slowed on Florida Mountain, new discoveries and consolidation of properties did not stop. Colonel William H. Dewey and his son Ed were no longer in the picture, but efforts to interest investors in Florida Mountain mines continued. The entrepreneurs, like Peter Steele and A. F. Stevens, generated excitement and hope for a return to past booms, but several Florida Mountain mines continued producing because of the dogged efforts of self-sufficient prospectors. Many had previously worked for the Trade Dollar and leased claims from the company after it had shut down.

After the Trade Dollar, 1911-1919

The 1910 census reported a population decline in the Florida Mountain region. The total population for the Dewey and DeLamar precincts was 622, down from 1,139 in the previous census. By 1910 there were thirty-six Chinese recorded in the county, compared with 171 in 1900. Most of them lived in DeLamar and Silver City, and were still engaged in similar occupations to those listed in the 1900 census. One interesting exception was a sheep herder named Tan King. Three African-Americans were recorded as living in Owyhee County, but they were not listed in the DeLamar, Dewey or Silver City precincts. The 1900 census had included a small group of Paiutes in the DeLamar precinct, but by 1910 they were no longer listed there. The 1910 Owyhee County census only listed Indians at the Duck Valley Reservation, though historical photographs and newspaper articles indicate they made seasonal pilgrimages to Silver City and DeLamar.

In 1910 about twenty per cent of Owyhee County's population was foreign-born white with the largest number still coming from England and Spain, including a few Basques. In Dewey and

DeLamar there was a significant population of Italian and Swiss-Italian immigrants, most of them working in the mines. Some other occupations were listed for these groups, such as dairymen, teamsters, woodchoppers, and farmhands. Other Spanish and Italian immigrants were listed as owning or working on farms, and a few worked as wood choppers.[120]

Roads into the area followed well-used routes. Travelers could get as far as Murphy by train. Two stage routes continued from Murphy to Florida Mountain. The shorter route followed Sinker Creek from Murphy while a longer route, with fewer steep grades and sharp curves, followed Reynolds Creek. Passengers and perishable supplies generally traveled the Sinker Creek route, while freight and other supplies came in by way of Reynolds Creek. Heavy winter snowfalls frequently restricted road travel, delaying mail delivery for days or even weeks. In 1908 Kinton Stevens traveled to Dewey, where he worked for the Trade Dollar Consolidated Mining & Milling Company. He reported a long and arduous trip from Murphy to Silver City along the Sinker Creek road. On the steepest grade, just before the descent into Silver City, passengers usually left the stage and walked to the summit. The trip from Silver City to DeLamar, Dewey, and Florida Mountain was finished by foot, horse, or wagon.[121]

Despite its shrinking population, tiny communities remained on Florida Mountain. People who stayed in the area continued their social activities. Newspaper reports for the Florida Mountain area around 1911 are scarce, but Kinton Stevens remembered attending dances at the Masonic Hall in Silver City. Travel to Silver City proved too difficult in inclement night weather, so Dewey residents founded a Knights of Pythias Lodge. The group purchased an empty building and furnished it as a lodge, including what became a well-used dance hall. Except for the lodge dances, most of the social activities for the miners revolved around still-numerous saloons in the area. Pay day for miners was a big event, as many of the miners spent most of their paychecks at their favorite saloons and bawdy houses.[122]

Years of mining activity had taken their toll on the landscape. Several 1910 photos show mountainsides bare of trees, heavily scarred by mines and temporary roads. Jay P. Hester and George H. Kurtzweil of the General Land Office surveyed Rich Gulch in June 1911. They described the area as "...covered with dense undergrowth. The only timber left is small and scattering fir, juniper, and mahogany..."[123] The lack of timber and the expense of acquiring it from other sources contributed to the difficulty of extensive mine development.

The Rich Gulch Mining Company struggled to further develop its operations. To bring in more money, the company intended to increase its capital stock in 1914. When A. F. Stevens died

suddenly in January of 1917, his wife took over his responsibilities as mine manager. A letter written in May 1917 shows her determination to keep the mine going:

> Mrs. Stevens...has great faith in the property and says her hope now is to open the north drift and do some sampling at upper works. It seems to abandon it now is not proving it by any means. We too are very sorry it has not turned out as was anticipated but all the mines around here that have produced millions had just such discouraging times that we know of personally and we are in the immediate vicinity of them.[124]

The letter also referred to a meeting in Salt Lake City that would determine Mrs. Stevens' plans. The outcome of the meeting was unrecorded, but in 1918 the Rich Gulch Mining Company forfeited its charter. It would be several years before activity was reported at these claims.

For several years a number of small operators leased the old Trade Dollar claims, which remained the property of the Swan Falls Power Company. In the summer of 1915, several claims, including the Belfast, were leased to "leasers [sic] feeling confident still better returns will be made from now on..."[125] The ownership changed in 1917, when the Seattle-based Florida Mountain Mines Company bought the Trade Dollar property.[126] According to the Owyhee Avalanche, the company planned to "develop a deep mine in Florida mountain and to open up the upper levels for the purpose of leasing the old workings whenever possible."[127]

At the end of the decade, the future looked promising to local boosters. The Banner mine, believed to be one of the richest mines on the mountain, was again in operation. The fabulous Trade Dollar was in new hands. Even as work on many mines continued, more changes were coming to Florida Mountain. John F. Sullivan and Robert Noble, partners who successfully worked a number of properties at Jacobs Gulch, died. Sullivan passed away in 1912 and Noble in 1915. Their properties became part of the Noble estate, leased to other operators for several years.

Back to the Basics, 1920-1929

The 1920 census showed a continued population decrease for the DeLamar and Silver City precincts. Only 171 people were recorded in Silver City, while DeLamar reported a population of thirty. The Dewey precinct had been absorbed into DeLamar. Six Chinese were reported in Owyhee County, two in DeLamar. The foreign-born white population of the county had dropped considerably--twelve per cent in 1920 as compared to almost twenty per eent in 1910. Twelve DeLamar residents were immigrants. Except for two Chinese gardeners, all were from England, Scotland, Ireland, and Canada. The DeLamar precinct listed only four women. Three of them were

married and gave no other occupation. The fourth was Jean Heazle, a homesteader who visited her brothers there in 1893 and remained until her death in 1949.[128]

The 1920s marked a period of continuous activity by Peter Steele, whose tireless efforts to secure financing for the Banner company appeared to be successful in the late 1910s. A 1921 newspaper article expressed the hope that "[o]ne of these days we will hear a welcome meal time whistle reverberating down Long Gulch and then shall we come to the glad realization of the fact that Silver City has come out of its unwarranted spell of lethargic somnambulism."[129]

Throughout the summer and fall of 1921 and early 1922, the newspaper reported steady activity at the Banner, celebrating every sign that the mine was going to produce at higher levels. The Banner Mining & Milling Company's report in the 1921 Annual Report of the State Mine Inspeetor described a mine developed by 12,000 feet of tunnels and drifts, equipped with an electric compressor. The Banner was a thirty-ton, three-stamp mill with pan amalgamation and concentration. The mine hired a crew of seven and reported: "The work done during the year eonsisted entirely of drifting on the vein, which exposed a number of good ore shoots. Everyone interested is feeling optimistic over the outlook." There was so much activity at the Banner mine that the Avalanche reported plans to repair the Long Gulch road to the mine in spring, 1921.[130]

Thc mueh-heralded Florida Mountain Mines Company, which bought the Trade Dollar property in 1917, dwindled to nothing by 1922. The company's property was sold at a sheriff's auction with one year allowed for the company to pay its debts and redeem ownership. After the year had passed with no redemption from Florida Mountain Mines, Peter Steele and his assoeiates in the Empire Mines Company bought the property. Within a few weeks of the sale, stockholders of the Florida Mountain Mines Company brought a lawsuit against Steele. The property remained idle until the suit was dismissed in the fall of 1924.[131] Subsequently, Steele and his partners established two leasing companies, Hoosier Leasing Company (incorporated in 1926) and Trade Dollar Leasing Company (incorporated in 1928) to lease somc of the old Trade Dollar claims. The Hoosier Company worked the Alpine vein, while the Trade Dollar Company worked several unidentified claims.[132]

Meanwhile, the independent miners of Florida Mountain continued working their own property or claims leased from larger holders. The Avalanche editor fondly referred to them as "the old prospecting fossils" in an article published in the spring of 1928. Among the "fossils" were Henry and James McNally, John Daly, Andrew Wennersten, and Carl Johnson. Wennersten, Johnson, and Daly all held claims on the upper slopes of the mountain. The McNally brothers were

in Jacobs Gulch, at the opposite end of the Noble properties, working the Stonewall and other claims originally located by their father John C. McNally in 1897. Although their property was located outside the study area, it was their strike in late 1927 that inspired the editor of the Owyhee Avalanche to announce "...a 'come back' for this old camp is practically reassured, if not already there."[133]

Subsistence Mining, 1930-39

The 1930 census showed another population loss for Silver City, which was down to 113 residents. Surprisingly, the population of DeLamar held steady. The increase from thirty to thirty-six residents was not a population boom, but a short-term holding pattern. For 1930 and later censuses only statistics are available. The county listed several Chinese, Japanese, and African-American residents. DeLamar's reported population was all white, with only eight immigrants. Silver City had 111 white residents, with twenty white immigrants. The remaining two may have been Chinese, but they were not identified. In 1930 twelve women lived in DeLamar. Their occupations were not identified, but by 1935 at least two women were engaged in part-time mining. Harriet Hindes and May Alcorn spent time during the summer reworking placer grounds and "making lots of pin money." This so-called "pin money" often put the food on the family table.[134]

The same year, Charles Hackney, long-time editor and publisher of the Owyhee Avalanche, retired and the paper ceased publication. DeLamar and Silver City news was reported by the Homedale newspaper, the Owyhee Chronicle. In 1934 another blow to the region occurred when Silver City lost the county seat to Murphy. The county no longer maintained roads in the region. The road between Silver City and DeLamar fell into disrepair. In spring 1939 DeLamar residents decided to send a delegation to Murphy to pressure the county commissioners to repair the road.[135]

Mountain residents were used to self-sufficiency. The McNally brothers struggled each spring through snow sometimes hip deep to reach their claims at the upper end of Jacobs Gulch. Even at 6,000 feet, they grew vegetables--"The turnips were as big as coconuts and the head lettuce more delicious than angel food." Homesteader Jean Heazle quickly treated her own rattlesnake bite and put down her survival to the "puttees and heavy canvas trousers" which protected her from a serious wound. In the early 1920s at the DeLamar mill Herbert and Frank

Bonnell built and installed a fifty-ton flotation plant with celled vats they manufactured themselves.[136]

During the hard times, there were those who saw opportunity in the idle mines of Florida Mountain. Old mine dumps were worked by individuals and companies formed just for that purpose. A 1938 newspaper article stated that the Trade Dollar rock dump was producing enough rich tailings to support three shifts daily on a fifty-ton mill.[137]

The 1930s brought the possibility of big money bringing large equipment to Florida Mountain. Goldsil Mines, a California corporation, came in to the area about 1935. They began negotiating leases for some of Peter Steele's Banner and Empire properties. Owyhee Chronicle writer J. L. Davies reported in August 1935 that "a business trip to Silver Saturday...found things booming there. The Goldsil Mining company is working one hundred hands, each employee having two hands, of course."[138] Goldsil Mines became a flash in the pan, operating only from June 1935 to July 1936, when their property went up on the auction block.

The Rich Gulch mine was also rejuvenated. The mine was operating late in 1935 when winter supplies were delivered to the camp. Photos taken at the camp show the presence of families and holiday celebrations.[139] The 1937 annual report of the State Mine Inspector reported the sale of the Rich Gulch mine to the Carson Divide Mining Company, which planned to put in a fifty-ton mill.

Nampa businessman B. A. Smith and his partner E. A. Clark of Boise formed the Mother Lode Mining & Milling Company in 1932. The Mother Lode Company leased property from old-time prospectors Andrew Wennersten and Carl Johnson, who had worked the claims for years. In 1935 Smith and Clark traveled east to seek investors and by 1937 were successful. Their level of success was not recorded, but according to the Owyhee Chronicle "their paydays are regular." The editor went on to mourn Andrew Wennersten, who died earlier in the year, as "a hard worker, but like many other mining trail blazers of the west he ordered a pair of wings ere he realized the full benefit of his labors."[140]

At the close of the 1930s, Florida residents still retained their sense of optimism. The Owyhee Chronicle reported "an active revival this spring...with several companies launching operations on active properties and other companies planning to open old mines which many years ago produced millions of dollars of gold ore."[141] Not all the promising developments came through--the Goldsil Mines Company disappeared and Carson Divide continued to struggle to run Rich Gulch at a profit. Peter Steele did not live to see his efforts cause a renaissance of Florida

Mountain mining. Still trying to hring in money needed to support large-scale operations in 1936, Steele was dogged by rumors of illegal dealings when purchasing the old Trade Dollar property. His friend Charles Hackney, retired editor of the Owyhee Avalanche, wrote a letter supporting Steele to Pennsylvania investor in December:

> Mr. and Mrs. Steele have sacrificed about everything to protect and hold these properties for the stockholders and mortgage holders....have disposed of their personal treasures and possessions to pay taxes and other expenses, in which they have had no assistance. They are now in their home at the mines, a mile from town and shut off from the world by deep snows, their only contact with this community and with the outside world being by means of our private phone line...The Steeles should not be here at all, as Pete is far from well; but they have no means to employ a care-taker.[142]

Peter Steele died in January 1938, at age 76. His wife, Marie, retained her interests in the Banner and Empire companies, continuing as an officer until 1954.

Florida Mountain Mining Hiatus, 1940-1975

The 1940 census no longer included a DeLamar precinct--it was absorbed into the Silver City (population 209) and Cow Creek (population 28) precincts.[143] Mining activity on Florida Mountain continued through 1940, with work reported on several properties. The Mother Lode Company, working the Wennersten group, hired four erew members and reported 326 feet of development. The Carson Divide Company at the Rich Gulch mine reported hiring a crew to do development work on seventeen claims. In July L. R. Shaver filed a location for one-half of the Tip Top mine.

World War II brought a halt to most mining activity on Florida Mountain. The war effort pulled attention and support away from gold mining to metals that would be more useful for defense. Gold was imported from South Africa to forge a diplomatic tie with an African country and establish a foothold in Africa for the Allies. The value of the idle mines lay in the metal of the mining equipment, rather than tbe ore in the ground. By October 1942 Owyhee County mines, including several in the Florida Mountain area, had provided about 500 tons of scrap metal.[144] The scrap metal drive resulted in some production for the Carson district. In 1943, the State Mine Inspector reported that during the dismantling of the DeLamar mill, four tons of mill cleanings produced fifty ounces of gold and 370 ounces of silver.

After World War II, mining activity on Florida Mountain continued at a minimal level for almost thirty years. The Banner and Empire companies and others held on to claims by completing assessment work as needed, but it would take higher silver prices and a different mining technology in the 1970s to bring life back the mining district. Rich Gulch Mines, the Mother Lode Mining & Milling Company, and many other small companies disappeared during the war. The boardinghouses, lodge halls, and stores of DeLamar, Dewey, and Silver City were abandoned. Dredge tailings almost obliterated Wagontown by the 1930s. Mill sites and mine headquarters were stripped of buildings and equipment during the scrap drives of the 1940s. Electricity and telephone service were discontinued shortly before World War II. Roads and mining scars disappeared under a new growth of scrub brush. Buildings collapsed under the weight of heavy snowfall. Few people stayed on the mountain through the harsh winters.

Silver City made the news again when Will Hawes became the last permanent resident of Silver City in 1943.[145] Former Silver City denizens returned for summer visits when the snow melted and the surrounding mountains were accessible again. However, the town never completely died. The roads to Florida Mountain became overgrown, making it more difficult than ever to visit old headworks communities.

By 1946, the principal output of Florida Mountain came from surface gold treated by amalgamation and concentration from the old Leviathan group of mines. Silver City and the surrounding area became a vacation spot and an area for weekend mining. In 1963 the Sidney Mining Company of Kellogg began examining claims between the former Dewey and DeLamar mines. Fifty new claims were staked on Florida and War Eagle Mountain. The area continued to lie idle until 1977, when the DeLamar Mines reopened. It became one of the largest open-pit gold and silver mines in the United States. In a sense this marked the return of large-scale mining and big capital to Florida Mountain. This phase of intensive mining again rearranged the face of the mountain, as open-pit and heap-leaching technologies transformed ore recovery methods and made mining profitable once more.

CONCLUSION

The archaeologists who examined the northwestern slopes of Florida Mountain found myriad traces of the noisy, busy life of the mining camp: collapsed adits and wooden buildings, decaying tins, bottle fragments, shoe leather, scraps of metal, chips of porcelain, sections of pipe and rail, piles of waste rock and mill tailings. The historians who examined the documentary records found

another kind of evidence--photographic, corporate, biographical, autobiographical--of that busy life.

Together, the physical and documentary remains exposed one mountain's contribution to western mining history. In a broad pattern the changes reflect what is already known about mining society. Placer miners swept the streams clean of their gold nuggets, powder, and other "colors." They formed districts and made rules. The bonanzas attracted hordes of other men and their families to the region. Next, miners looked for the sources of the placers feeding mountain streams. They found them, eventually, in quartz-filled veins and fissures. Claim discoverers struggled to accumulate or attract investment capital and succeeded in varying degrees. Most discoverers did not ultimately become wealthy from the treasure; later developers were the ones to reap the most benefits. Chinese miners worked the placers after Euro-Americans, then eventually went back to the West Coast or China. The mining economy usually was the sole support of nearby supply towns like Silver City. When gold and silver became unprofitable to mine, local inhabitants moved away, the town collapsed, and the mountains became silent again.

Within this general pattern, Florida Mountain has its own unique landmarks. Its ledges were discovered late compared to those of other Owyhee mountains. It took miners years of drilling into the mountain by hand before they attracted outside capital. Technological innovations arrived by stages: hand steel to Burleigh drills and diamond drills; steam to electricity; ore wagons to on-site mills where human hands never touched the ore. Yet the most primitive technologies co-existed with the most advanced ones well into the early twentieth century. Complex eastern corporate mining companies were located next to one-man or two-man claims. Entrepreneurs such as William Dewey established the reputation of Florida Mountain as a rich lode, but other men like John F. Sullivan continually worked the mountain into the twentieth century. The only way to stay in the mining business was by acquiring and consolidating several claims, then working them all as one mine.

These individual claims blended into several large mining landscapes, separated only by political boundaries in early county claim books and deed records. Florida Mountain's historical mining operations must be examined in terms of these mining landscapes and their corporate character, along with changing mining practices and settlement patterns over time. Their significance does not lie in the details, but rather in the larger picture. Florida Mountain's history broadens the historieal context of the Carson Mining District and Silver City. It also increases understanding of nineteenth and twentieth-century nining activity in southwestern Idaho.

END NOTES

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3. A detailed description of the Florida Mountain veins and their ore deposits, mineralogy, structures, formations, and other geological features is found in Waldemar Lindgren, "The Gold and Silver Veins of Silver City, De Lamar, and other Mining Districts in Idaho," Twentieth Annual Report of the U. S. Geological Survey (Washington, D. C.: Government Printing Office, 1900). A helpful commentary on Lindgren's work was prepared by Robert Romig and is available in two manuscripts identified as RS 1012 and RS 1013 at the Idaho Historical Society.

4. "Silver City, Description of the Camp," Idaho Avalanche, January 19, 1889, page 1.

5. See Roderick Roland Asher, Geology and Mineral Resources of a Portion of the Silver City Region, Owyhee County, Idaho, Masters Thesis, University of Idaho, May 1968, pages 204- 212; History of the Idaho Territory (San Francisco: Wallace W. Elliott and Co., 1884), page 179; and "Silver City, Description of the Camp," Idaho Avalanche, November 10, 1888, page 1.

6. See Piper and Laney, and Alan A. DeLucia, director, The Compact Atlas of Idaho (Moscow: The Cart-O-Graphics Laboratory, Department of Geography, University of Idaho, 1983), page 16.

7. Kinton B. Stevens, "Mining Recollections in the Owyhee Mountains," Idaho State Historical Society, Boise, undated, page 9. Stevens manuscript includes a photograph of such a snow unnel. A copy of the manuscript without photographs is loeated at the Owyhee County Museum in Murphy and has been published as "Mining Recollections in the Owyhee Mountains 1908-1911," Owyhee Outpost 22 (1991).

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9. Ibid., page 2-48, 49.

10. "Local Brevities," Owyhee Avalanche June 16, 1922; and "Armyu Works Devastating Mountain," Owyhee Avalanche June 28, 1922.

11. Thomas J. Green, "Recent Archaeological Investigations in Owyhee County, Idaho." Owyhee Outpost 13 (1982), page 7.

12. Ibid., page 8.

13. Steven J. Crum, The Road on Which We Came (Salt Lake City: University of Utah Press, 1994), page 17-41.

14. See Idaho Avalanche (Silver City), December 8, 1877; March 30, 1878; May 10, 1879.

15. Department of the Interior, Bureau of Land Management, Final Environmental Statement, Silver City, Idaho (n.p.: 1978), page 2-1.

16. The Idaho Avalanche, January 19, 1889.

17. Richard V. Francaviglia, Hard Places: Reading the Landscape of Ameriea's Historic Mining Districts (Iowa City: University of Iowa Press, 1991), page 18-20.

18. Final Environmental Statement, Silver City, Idaho, page 2-13.

19. Stevens, page 7.

20. See Bureau of the Census, Compendium of the Census, 1870-1920 (volume titles vary); Stevens manuscript, Idaho Historical Society, and Owyhee County Museum, Murphy; Records of the Trade Dollar Consolidated Mining & Milling Company, the Bancroft Library, University of California, Berkeley; Ruby City and Silver City newspapers 1864-1932, including Owyhee Avalanche, Owyhee Semi-Weekly Tidal Wave, Idaho Avalanche, and Silver City Nugget.

21. Owyhee County, Idaho, Twelfth Census, 1900, Records of the Burcau of the Census, Record Group 29, National Archives, Washington, D.C., microfilm at theldaho Statc Historical Society, Boise.

22. W. Turrentine Jackson, "Wells Fargo in Owyhee County," Owyhee Outpost 20 (1989), page 46.

23. Ibid., page 48.

24. Ibid., page 67.

25. Carlos A. Schwantes, In Mountain Shadows: A History of Idaho (Lincoln: University of Nebraska Press, 1991), page 83-84.

26. Dale M. Gray, "Owyhee Railroads," Owyhee Outpost 20 (1989), page 94-99.

27. "Silver City, Description of the Camp," Idaho Avalanche, February 9, 1889, page 1; "Mining Mention," Idaho Avalanche, November 21, 1891, page 3.

28. "John Sullivan on Early Days of Silver," Idaho Daily Statesman, April 9, 1911, sec. 2, p. 5.

29. G. W. Barrett, "When Big Money Came to Owyhee," (1969), 13: 22-29.

30. Idaho Digest and Blue Book (Caldwell, Idaho: 1935), page 894; "Silver City Miner Dies at Boise Hospital," Owyhee Chronicle, January 6, 1938.

31. "Decline in Silver," Idaho Avalanche, July 1, 1893, page 1.

32. See American Mining Congress, The Basis of Sound Coinage (AMA: 1965); John A. Brennan, Silver and the First New Deal (Reno: University of Nevada Press, 1969); Allison Butts, ed., Silver, Economics, Metallurgy and Use (Princeton, N.J.: D. Van Nostrand Co., 1967); William J. Gaboury, "From Statehood to Bull Pen: Idaho Populism and the Coeur d'Alene Troubles of the 1890s," in Idaho Heritage, pages 95-102; W. J. Streeter, The Silver Mania, an Expose of the Causes of High Price Volatility of Silver (Dordrecht, Holland: D. Reidel Publishing Co., 1984); and Allen Weinstein, Prelude to Populism: Origins of the Silver Issue, 1867-1878 (New Haven: Yale University Press, 1970).

33. E. D. Gardner, "Prospecting for Lode Gold and Locating Claims on the Public Domain," in the Thirty-Seventh Annual Report of the Mining Industry of Idaho for the Year 1935. (n.p., n.d.), page 21.

34. Charles A. Bramble, The ABC's of Mining: A Handbook for Prospectors, (Chicago and New York: Rand McNally Co., 1898), page 21.

35. Idaho Avalanche, July 28, 1894, quoted in Caywood, Catton, and Putnam (HRA), page 65.

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37. Janene Caywood, Theodore Catton, and David Putnam (Historical Research Associates, Inc.), Comprehensive Historical Overview and Results of Archaeological Test Excavations at Selected Historical Mining Sites on Florida Mountain, Owyhee County, Idaho, (Corvallis, Oregon: CH2M-Hill, 1990), page 69; 24. Linda Morton, "Stamp Mills in Owyhee County," Owyhee Outpost 17 (1986), page 19.

38. Morton, page 24-25; for information about chemical used in the milling process see papers of the Trade Dollar Consolidated Mining & Milling Company, the Bancroft Library, University of California, Berkeley.

39. Ibid., page 25-28.

40. Silver City Nugget, July 22, 1904.

41. Index to Mining Claims, Owyhee County Clerk, Murphy, Idaho, Book 3, page 747. George Kidder was the locator.

42. Stevens, page 19.

43. Byron W. Johnson, "Dewey Remembers the Colonel," Owyhee Outpost (May 1995), page 30.

44. See Kinton Stevens, page 17; and Wilma Lewis Statham to Dan Hutchinson, Bureau of Land Management, August 16, 1989.

45. 1870 Census of Idaho (Boise: Idaho Genealogical Society, n.d.), page 168-191.

46. "Mining Notes, Idaho Avalanche, September 29, 1877, page 3.

47. See Territorial minutes of the Owyhee Board of County Commissioners, Owyhee County Clerk, Murphy, for a description of the fire.

48. See Deed Index, Owyhee County Clerk , Murphy, Idaho, Book P, page 592. The handwritten entry is difficult to decipher and has been interpreted to refer to the Black Jack. A date of 1871 is consistent with stories later published in the Idaho Avalanche and cited elsewhere in this report. See also pages 421 and 592 for references to Knott: the mines were William Knott Remunerative and Idaho Standard. See also Miscellaneous Records, Book 3, page 33.

49. Lindgren, page 137. Lindgren did not say where he saw trenches, but archaeologists in the 1990s noticed a series of trenches at the top of the mountain.

50. Dan De Quille (William Wright), The Big Bonanza (New York: Alfred A. Knopf, 1947; originally published as History of the Big Bonanza in 1876), page 304, 365-70.

51. "Local Mining Review," Owyhee Daily Avalanche, April 3, 1875, page 2.

52. "Mining Notes," Owyhee Daily Avalanche September 18, 1875, page 2.

53. "Florida Mountain Mines," Owyhee Daily Avalanche, September 27, 1875, page 5.

54. "Florida Mountain Mines, Idaho Weekly Avalanche, October 30, 1875, page 3.

55. "Florida Mountain Mines," Idaho Weekly Avalanche, October 30, 1875, page 3; and "Mining Notes," Idaho Avalanche, December 8, 1877, page 3.

56. "The Mines," Idaho Avalanche, August 20, 1876, page 3.

57. "Mining Notes, Idaho Avalanche, September 29, 1877, page 3.

58. "Mining Notes," Idaho Avalanche, May 12, September 8, September 29, 1877, page 3.

59. See "Mining Notes" columns for September 29, October 6, October 13, November 10, November 17, December 1, and December 8, 1877.

60. "Mining Claims Located," Idaho Avalanche, December 4, 1880, page 3.

61. "Mining Notes," Idaho Avalanche, October 30, 1880, page 3. See also Index to Mining Claims, Owyhee County Clerk, Murphy, Idaho, Book 6, pages 206, 320, and 586.

62. "Mining Notes," Idaho Avalanche, November 20, 1880, page 3.

63. Idaho Avalanche, January 8, 1881, page 3.

64. "Mining Notes," Idaho Avalanche, September 10, 1881, page 3.

65. See "Mining Notes," Idaho Avalanche, January 26, 1878, page 3. Ores were sent to various mills.

66. "Mining Notes," Idaho Avalanche, December 8, 1877, page 3.

67. See "Mining Notes" in Idaho Avalanche, page 3, for May 23, June 23, and July 6, 1878.

68. "Mining Notes," Idaho Avalanche, September 14, 1878, page 3.

69. "The Florida Mountain Mines," Idaho Avalanche, May 10, 1879 page 3. Issues of the paper throughout 1879 follow the progress of working mines.

70. "Mining Notes," Idaho Avalanche, April 10, 1880, page 3.

71. 1880 Census of Idaho (Boise: Idaho Genealogical Society, n.d.).

72. "Mining Notes," Idaho Avalanche, March 23 and March 30, 1878, page 3.

73. Idaho Avalanche, December 31, 1881, page 3.

74. "Mining Notes," Idaho Avalanche, July 22, 1882, page 3.

75. "Mining Notes," Idaho Avalanche, November 11, 1882,page 3. See also "Mining Notes" for December 9, 1882.

76. "Mining Notes," Idaho Avalanche, December 9, 1882, page 3.

77. "Mining Notes," Idaho Avalanche, March 3, 1883, page 3.

78. "Mining Notes," Idaho Avalanche, October 29, 1883, page 3.

79. "Mining Notes," Idaho Avalanche, October 27, 1883, page 3.

80. "Local Intelligence," Idaho Avalanche, May 16, 1885, page 3; and B.W. Johnson, "Dewey Remembers the Colonel," Owyhee Outpost #26, May 1995, page 31-32.

81. Idaho Avalanche, August 1, 1885, page 3.

82. Idaho Avalanche, October 31, 1885 page 3.

83. See Idaho Avalanche, May 21, 1887, page 3; and "Local Intelligence," Idaho Avalanche, June 11, 1887, page 3.

84. See Waldemar Lindgren, "General Plan of Mines on Florida Mountain, Silver City, Idaho," a map in Twentieth Annual Report, US Geological Survey, Part III, Plate XXIII.

85. "Local Intelligence," Idaho Avalanche, July 30, 1887, page 3. See also same column for August 13, 1887.

86. "Mining Notes," Idaho Avalanche, September 24, 1887, page 3. See also "The Mines," October 20, page 3.

87. "Local Intelligence," Idaho Avalanche, August 25, 1888, page 3.

88. "Brevities," Idaho Avalanche, December 15, 1888, page 3, and an item with on page 3 of the January 5, 1889, issue.

89. Idaho Avalanche, February 15, 1890, page 3

90. See "From Old War Eagle," Caldwell Tribune, September 6, 1890, page 6; and "Local Intelligence," Idaho Avalanche, May 24, August 2 and August 30, 1890, page 3.

91. Idaho Avalanche, February 15, 1890, page 3.

92. See "Mining Mention," Idaho Avalanche, September 20, 1890, page 3; "Local Intelligence," December 27, 1890, page 3; and "Local Intelligence," March 7, 1891, page 3.

93. "Owyhee Mines," Caldwell Tribune, February 7, 1891, p. 7; and "Local Intelligence," Idaho Avalanche, March 8, 1990, page 3.

94. "Trade Dollar Mine," Idaho Avalanche, May 10, 1890, page 3; and "Local Intelligence," Idaho Avalanche, April 19, 1890, page 3.

95. "Local Intelligence," Idaho Avalanche, June 14 and July 5, 1890, page 3.

96. "Mining Mention, Idaho Avalanche, January 31, 1891, page 3.

97. "Local Intelligence," Idaho Avalanche, March 21, 1891, page 3.

98. "Local Intelligence," Idaho Avalanche, March 21, 1891, page 3.

99. "Phillips and Sullivan Mines," Idaho Avalanche, February 13, 1892, page 1.

100. "Phillips and Sullivan," Idaho Avalanche, August 23, 1895, page 13.

101. "The Deal Closed," Idaho Avalanche, February 21, page 1.

102."New Mining Company, Colonel Dewey Organizes a Heavy Enterprise in Pittsburg," Idaho Avalanche, February 7, 1896, page 1.

103. "The Spring Boom," Idaho Avalanche, February 21, 1896, page 1; and "Mining Mention," April 10, page 1.

104. "There's a Hole, Clear Through Florida Mountain," Idaho Avalanche, November 20, 1896, page 1.

105. "Mining Mention," Idaho Avalanche, October 2, 1896, page 1.

106. Historical, Descriptive, and Commercial Directory of Owyhee County, Idaho (Silver City: Press of the Owyhee Avalanche, 1898), page 67-68.

107. Re coal, see "Coal for our Mine," Idaho Avalanche, April 30, 1897, page 1. See also "Mining Mention," Idaho Avalanche, May 28, 1897, page 1. Re central station, see "Mining Mention," Idaho Avalanche, February 4, 1898, page 1.

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109. Byron W. Johnson, "Dewey Remembers the Colonel," Owyhee Outpost (May 1995)

110. Robert Romig, "Florida Mountain Mining," (Boise: Idaho Historical Society), Reference Series 1012, page 2. This manuscript is an excellent analysis of the mine superintendent's annual reports extant for the 1900-1910 period.

111. Stevens, page 5-7; Owyhee County, Idaho, Twelfth Census, 1900, Records of the Bureau of the Census, Record Group 29, National Archives, Washington, D.C., microfilm at Idaho State Historical Society, Boise; "Bids Wanted for Supplies for Trade Dollar Boarding House," Silver City Nugget, August 26, 1904.

112. "Local and Personal," Silver City Nugget, July 19, 1901, page 1; Index to Mining Claims, Owyhee County Clerk, Murphy, Book 12, page 364; Book 15, page 425; Book 16, page 492; Book 17, page 288; Book 18, page 276.

113. "Mining Mention," Silver City Nugget, September 20, 1901, page 3

114. "Mining Mention," Silver City Nugget, September 20, 1901; "Banner Mine Incorporated, One Million Dollars Capitol," Owyhee Avalanche, June 9, 1905; Index to Mining Claims, previously cited, Book 14, page 308; Book 15, page 564; and Book 20, page 55, respectively.

115. Eleventh Annual Report of the Mining Industry of Idaho for the Year 1909 (n.p., n.d.), page 85-86.

116. Report of the Rich Gulch Mining Company for 1913, Annual report files of the State Mining Inspector, Idaho Geological Survey, University of Idaho; Fifteenth Annual Report of the Mining Industry of Idaho for the Year 1913 (n.p., n.d.).

117. Records of Rich Gulch Mining Company, 1906-1917, The Bancroft Library, University of California, Berkeley.

118. Records of the Trade Dollar Consolidated Mining and Milling Company, Owyhee County Museum, Murphy, Idaho; Stevens, .

119. Welch, page 85.

120. Bureau of the Censns, Compendium of the Thirteenth Census, 1910 (Washington, D.C.); Owyhee County, Idaho, Thirteenth Census, 1910, Records of the Bureau of the Census, Record Group 29, Washington, D.C., microfilm at Idaho State Historical Society, Boise.

121. Kinton B. Stevens, "Mining Recollections in the Owyhee Mountains 1908-1911," Owyhee Outpost 22 (1991): 20.

122. Stevens, Owyhee Outpost, 34-36. See also Mildretta Adams, Sagebrush Post Offices: A History of the Owyhee Country (Pocatello: Idaho State University Press, 1986 and Mike Hanley with Ellis Lucia, Owyhee Trails, The West's Forgotten Corner (Caldwell, Idaho: The Caxton Printers, Ltd., 1973): 205-207.

123. Records of the Surveyor General, vol. 271, Idaho State Office, Bureau of Land Management, Boise, page 653.

124. Letter from an unidentified writer to Dr. Thomas Reid dated May 8, 1917, Records of the Rich Gulch Mining Company, 1906-1917, The Bancroft Library, University of California, Berkeley.

125. "The Mining News of Surrounding Hills," Owyhee Avalanche, July 2, 1915.

126. In 1913 the property included 39 patented claims: the Black Jack, Empire State, Phillips, Sullivan, Belfast, Colorado, Sierra Nevada, Independence, Jumbo, South Pluto, Black Bart, James G. Blaine, Pluto, Trade Dollar, Humboldt, Fraction, South Extension Blaine, Caroline, Owyhee Treasure, Seventy-Nine, J.M. Guffey, Alpine, Little Chief, Harrison, Allegheny, Twenty One, Sun Flower, Industry, Economy, North Extension Commonwealth, Rough & Ready, Commonwealth, Comstock, Baltic, Sterling, Number Two Placer, Gordon, Palm Beach, Caliph of Bagdad. (Report of the Swan Falls Power Company for 1913, Annual report files of the State Mining Inspector, Idaho Geological Survey, University of Idaho, Moscow.)

127. "Depths of Florida Mountain to be Opened by New Company," Owyhee Avalanche, June 1, 1917.

128. Bureau of the Census, Compendium of the Fourteenth Census, 1920 (Washington, D.C.), Owyhee County, Idaho, Fourteenth Census, 1910, Records of the Bureau of the Census, Record Group 29, Washington, D.C., microfilm at Idaho State Historical Society, Boise.; Owyhee Avalanche, January 3, 1926.

129. Twenty-third Annual Report of the Mining Industry of Idaho for the Year 1921, page 82; "And Still Improving," Owyhee Avalanche, June 24, 1921.

130. "Big Deal in Mines Consummated," Owyhee Avalanche, August 10, 1923.

131. "Alleged Case Dismissed," Owyhee Avalanche, October 24, 1924.

132. "This Camp Coming Back Strong," Owyhee Avalanche, November 4, 1927.

133. Bureau of the Census, Compendium of the Fifteenth Census, 1930 (Washington, D.C.)

134. "De Lamar," Owyhee Chronicle, October 10, 1935.

135. "Road Problems Discussed at DeLamar," Owyhee Chronicle, June 8, 1938.

136. "De Lamar," Owyhee Avalanche, May 5, July 21, 1922; June 28, 1929.

137. "Gold Pouring from Old Area," The Post Register (Idaho Falls), September 9, 1938.

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139. "Silver City News," Owyhee Chronicle, December 26, 1935; Rich Gulch file, Photograph collection, Owyhee County Museum, Murphy, Idaho.

140. "De Lamar," Owyhee Chronicle, September 23, 1937.

141. "Mining Company Leases Silver City Ore Mill," Owyhee Chronicle, June 19, 1939.

142. Charles Hackney to Paul Collins, December, 1936, Box 3, Papers of the Banner Mining & Milling Company, Idaho State Historical Society, Boise.

143. Bureau of the Census, Compendium of the Sixteenth Census, 1940, (Washington, D.C.)

144. Idaho Daily Statesman, October 11, 1942.

145. Welch, page 10.

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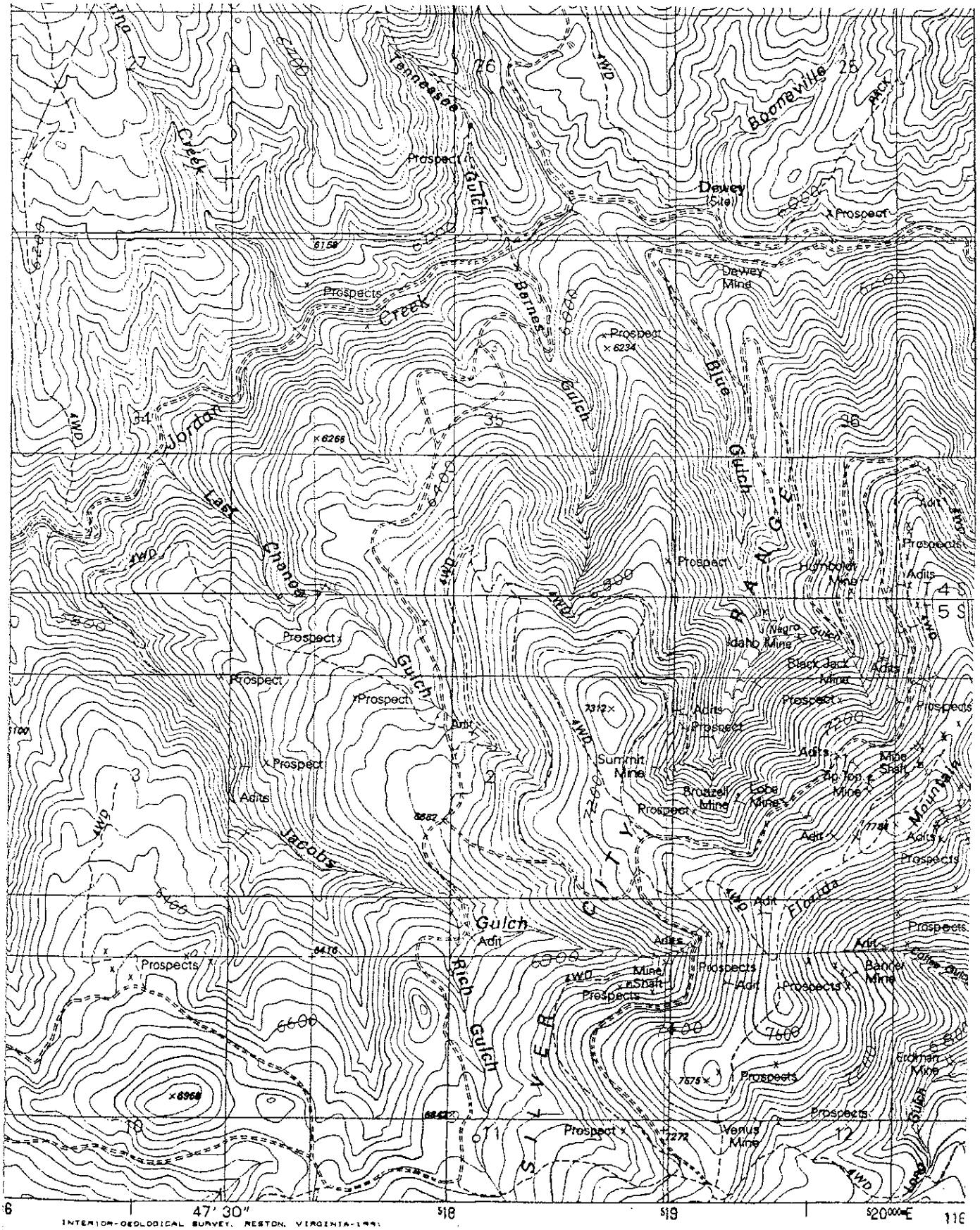
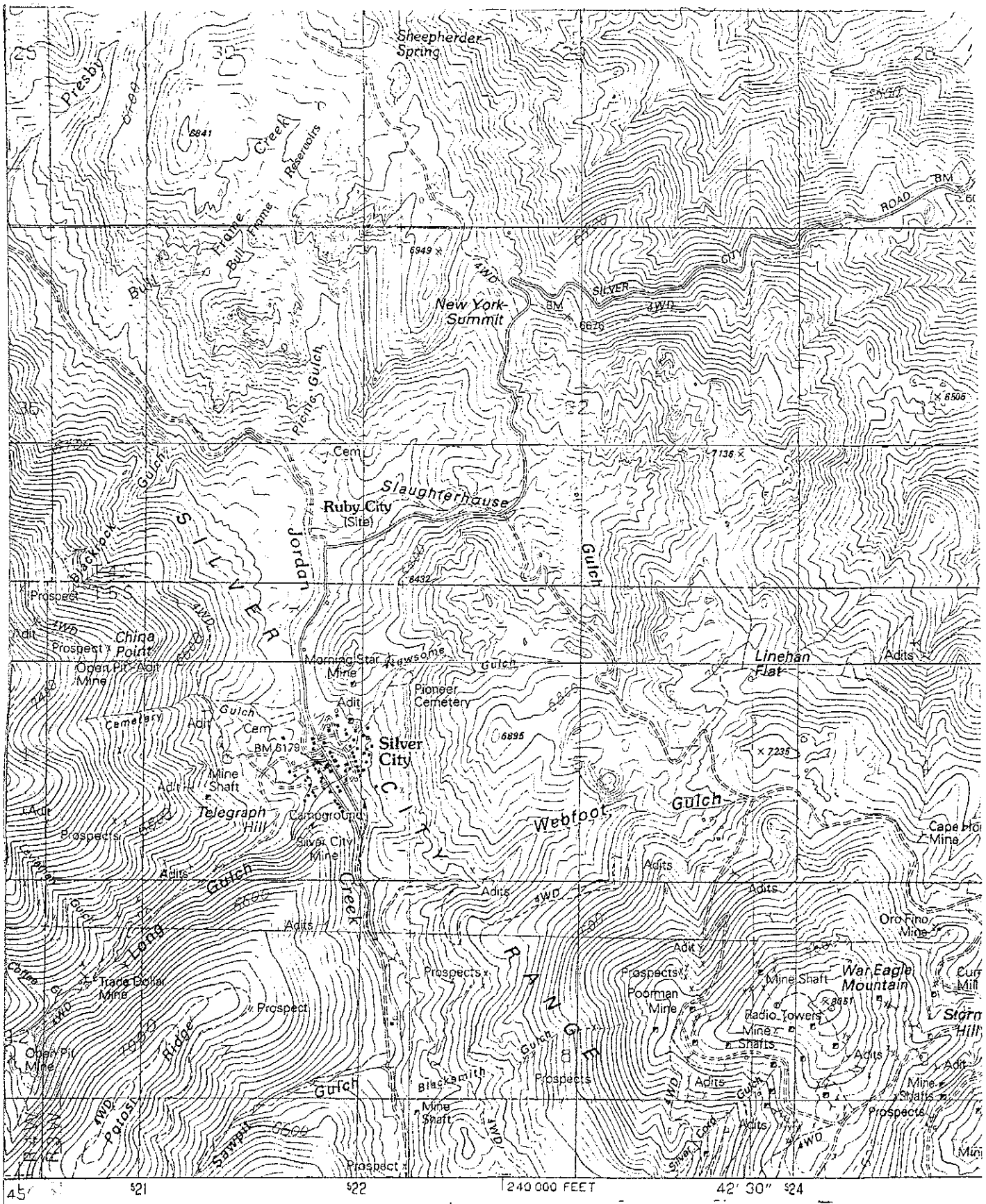


USGS DeLamar 7.5'



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